

Inservice Training Programme for High School Teachers  
of Indian Ordnance Factory, Ministry of Defence,  
Govt. of India in Core Areas of Education  
( A R E P O R T )

Venue Ordnance Factory Training Institute  
Ishapore, West Bengal

Duration : 29. 6 92 to 8. 7. 92

*Programme Consultants :*

PROF. K. C PANDA

PROF. S. T. V. G. ACHARYULU

*Programme Directors*

DR. D. K. BHATTACHARYA

DR. P. DAS

विद्यया ऽ मृतमश्नुते



एन सी ई आर टी  
NCERT

DEPARTMENT OF EDUCATION

REGIONAL COLLEGE OF EDUCATION

BHUBANESWAR - 751007

1992



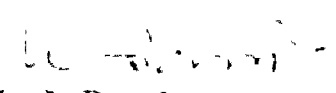
## F O R E W O R D

On the request of the Ordnance Factory Board, Ministry of Defence, Government of India, the N.C.E.R.T. had agreed to organise Inservice Training Programme for their School Teachers in Core areas of education, Language, Science & General Science. The Regional College of Education, Bhubaneswar was entrusted with this task. Accordingly the Department of Education of this College organised the first phase of such training programme for all U.O.W est Bengal Factory Secondary School Teachers from 29/6/92 to 8/7/92 at Ishapore in thrust areas of education as visualised in NPE and POA(1986).

I have great pleasure in recording my appreciation for the academic & organisational efforts made by Prof. S.T.V.G. Acharyulu for this programme. I would like to appreciate the commendable work done by the Programme Directors - Dr.D.K. Bhattacharya, Dr.P. Das and external resource persons Dr.S.P. Bhattacharya, HOD, Education of Calcutta University, Dr.B.N. Roy, Field Adviser, Calcutta & Internal Resource Persons - Dr.S.P. Anand, Sri .S. Hati, Dr.P. Purohit of this College for their active help.

I also record my sincere thanks to General Manager, Ordnance Factory, Ishapore, Principal and other staff members of Ordnance Factory Training Institute, Ishapore for their active support and Co-operation in completing this programme.

Finally I hope, that the materials exchanged will be used further the programme would be more effective, for teachers for their effective instructional practices.

  
Prof. K.C. Panda  
Principal  
Regional College of Education  
Bhubaneswar.

The participants were on the thrust areas of education, outlined by N.E.P. (1966) for Secondary School Teachers and Rifle Factories, West Bengal was organised at the Central Training Institute (CTI) Ishapore from 17.12.74 to 17.01.75 by the Dept. of Education, Regional Office, Durgam, Bhutanagar. Fortyeight participants attended this programme and they have been exposed to the theories, practices and innovations in the fields of teaching, learning, classroom management and evaluation. Several faculty members of the Dept. of Education, R.C.E., Calcutta and Calcutta University served as resource persons. In this connection, I wish to record my deep sense of appreciation and thanks to Dr.F.C.Handa, Principal, R.C.E., for his support for the academic and administrative inputs he has provided from planning to organisation of this programme. My thanks are due to my distinguished colleagues - Dr. S. Chattacharya & Dr. A. Das (Programme Directors), Dr. S. K. Das, Sri S.C.Hati and Dr.P.Purohit for their useful and sincere contribution to the success of the programme. They have developed instructional materials specially for this course and distributed the same to the participants. The staff members of Extension Services Unit of this college deserve special thanks for coordinating the programme. I am also thankful to the General Manager, Rifle Factory, Ishapore, Principal & other staff of the CTI for their timely support and help and generous cooperation in conducting the programme in a meaningful way. The success of this programme is primarily due to the interest of the participants and the support of my colleagues and other resource persons. I hope that this humble report will stimulate further efforts of teachers and teacher educators for better teaching and learning practices in tune with the National Policy on Education. Nothing pleases us more than this.

Dr.S.T.V.S.Acharyulu  
Prof.& Head, Edn. & Dean

## A C K N O W L E D G E M E N T

Consequent upon the request of the General Manager Administration, Indian Ordnance Factories, Govt. of India, Ministry of Defence, Ishapore, West Bengal to the NCERT, New Delhi for organising a training programme for its in-service teachers based on the recommendations of the Chattopadhyaya Commission crossing an efficiency bar or revision of pay scales to senior scale or selection scale, the Regional College of Education, Bhubaneswar worked out a detailed need-based programme in the areas of education, language, science and mathematics.

This programme was organised at Ishapore for 48 inservice teachers of secondary schools from 29.6.92 to 8.7.92 in the Thrust areas of education as emphasised by NPE (1986). The programme was formally inaugurated by the programme Director Dr.D.K.Rhattacharya who spelt out clearly the objectives of the programme and requested the participants to derive maximum benefits from this programme by interacting with the resource persons. Various topics like NPE (1986), its plan of action, professional ethics of teachers, Accountability of teachers. Taxonomy of educational objectives, Minimum Levels of learning, continuous and comprehensive evaluation, Diagnostic evaluation & remedial instruction, core teaching skills, Teacher effectiveness, Mental health of teachers, Action research in classroom, values and attitudes in Education, Motivation & learning, educational technology were discussed in detail by the resource persons following the participatory approach.

The participants showed high sense of dedication and devoted long hours for interacting & discussing various operational issues in teaching-learning & evaluation in their schools.

On the last day, Sri P.K.Ghosh Chowdhury, General Manager, Rifle Factory, Ishapore was the Chief Guest in the valedictory function. In his valedictory address, Sri Ghosh emphasised the need of such orientation programme for inservice teachers for maintaining standards and quality in education and requested the distinguished participants to utilise their training experience in the classroom for effective teaching and testing.

We are really thankful to the General Manager, Rifle factory Ishapore, Principal and other staff of the OFTI, Ishapore for their help and coopeeation in conducting this programme smoothly. The participants also deserve congratulation for their patience and active involvement in the programme.

We will be failing in our duties, if we do not extend our sincere gratitude to our Principal Prof.K.C.Panda and Head of Instructions, Prof.S.T.V.G.Acharyulu who acted as consultants and offered valuable guidance and suggestions for this programme.

We also record our sincere thanks to distinguished resource persons Prof.S.P.Bhattacharya, Prof. B.N.Roy, Dr.S.P.Anand, Sri G.S.Hati & Dr.P.Purohit who gave benefit of their experiences and contributed papers as background materials for the participants.

Finally we are also thankful to the staff members of the Extension Services Unit of this College for their assistance in conducting this programme.

Dt.1.1.1993

( Dr. D.K.Bhattacharya & Dr.P.Das )  
PROGRAMME DIRECTORS

## Content

Foreword	i
Preface	ii
Acknowledgement	iii
List of Resource Persons	v
List of participants	vi
Programme Schedule	ix

<u>Papers</u>	<u>Page</u>
1.Approach Paper	1-2
2.Motivation & Learning Prof.B.N.Ray	3-4
3.Conditions for promoting learning Prof.B.N.Ray	5-6
4.Evaluation of attitudes and values Prof.B.N.Ray	7
5.Core Training Skills: An Innovation Dr.D.K.Bhattacharya	8-17
6.Institutional Planning Dr.D.K.Bhattacharya	18-19
7.Guidance for mental health in schools Dr.S.P.Anand	20-26
8.Action Research Dr.S.P.Anand	27-41
9.Teaching Process & its effectiveness Dr.S.P.Anand	42-56
10.Taxonomy of Educational Objectives Dr.P.Das	57-59
11.Teaching and Educational objectives Dr.P.Das	60-63
12.Continuous and comprehensive Evaluation Dr.P.Das	64-67
13.Tools & Techniques of Evaluation Dr.P.Das	68
14.Value Education in Schools Sri G.S.Hati	69-71
15.Professional Ethics & Code of Conduct Dr.P.Purohit	72-82
16.Educational Technology Dr.P.Purohit	83-86

List of Resource Persons

1. Pr f.S.F.Phattacharya,  
Prof.& Head of the Department  
Department of Education  
Calcutta University  
Calcutta.
2. Prof.B.N.Roy,  
Field Advisor,  
N.C.E.R.T.,  
P-13, C.I.T.Road,  
Calcutta.
3. Dr.D.K.Bhattacharya,  
Peader in Education  
Regional College of Education  
Bhubaneswar.
4. Dr.S.P.Anand,  
Reader in Education  
Regional College of Education  
Bhubaneswar.
5. Dr.P.Das,  
Reader in Education  
Regional College of Education  
Bhubaneswar.
6. Sri G.S.Hati,  
Sr.Lecturer in Education  
Regional College of Education  
Bhubaneswar
7. Dr.F.Purehit  
Lecturer in Education  
Regional College of Education  
Bhubaneswar



LIST OF PARTICIPANTS

1. Mr. Mahendra Prasad  
4, Newseal Lane,  
Howrah - 1.
2. Mr. Prakash  
11, Lakshmi Mohal,  
Orderly Bazar,  
Barrackpore 24 P.G.S. (N).
3. Mr. B. Singh  
81, Loolary Mohal,  
Orderly Bazar,  
Barrackpore 24 P.G.S. (N).
4. Devendra Prasad Sinha,  
No. 20 Mail Gate Malik, U.R.,  
P.O.: Ichapur  
Nawabgunj,  
Dist: 24 P.G.S. (N)  
West Bengal.
5. Jeetendra Nath Sharma,  
H/5, Industrial BSG. ESTE.  
Judge Budge  
24 Parganas (S)  
West Bengal  
PIN: 743319
6. N.A. Das,  
East Chandrapuri,  
Nandave Road,  
P.O.: Chanchandrapur,  
PIN: 743 102
7. Indrendu Pramanik,  
Vill/P.O.: Pantihal,  
Dist: Howrah.
8. Mr. Paul,  
Bardapalli,  
P.O.: Bahara  
Dist: 24 Parganas (N)
9. H.C. Das,  
Vill: Burachika  
P.O.: Guleria,  
Dist: North 24 P.G.S.
10. Mr. ...  
P.O.: ...  
Dist: ...
11. Geetansree Chakraborty,  
Mailhati Sham  
Bachampara,  
P.O.: Bahara,  
24 Parganas.
12. Smt. Grace Hansda,  
109, The park  
P.O.: Ichapur,  
Dist: 24 P.G.S.
13. Smt. Jyoti Lekha Bose,  
5/3 The park,  
P.O.: Ichapur Nawabgunj,  
Dist: 24 P.G.S.
14. Smt. Subhra Mukherjee,  
East Maniktala,  
P.O.: Ichapur Nawabgunj  
Dist: 24 P.G.S.
15. Smt. Anima Roy,  
H/C-99 Bragonepur,  
P.O.: Chanchrapara,  
Dist: 24 Parganas.
16. Sri Anarat Tiwary,  
39, H.D. Road,  
Douripore  
Mailhati, 24 P.G.S. (N).
17. Sri Vishwa Nath Ram,  
H/C. Rajkumar Singh,  
P.O.: Hazinagar,  
Dist: 24 P.G.S. (N).
18. Sri Birendra Singh,  
43, Abduljabbar Road,  
P.O.: Chanchrapara,  
Dist: 24 P.G.S. (N).
19. Sri Rajnathnyadava,  
H/C. Hazinagarbyelane Road  
P.O.: Hazinagar,  
PIN: 743135  
Dist: 24 P.G.S. (N).
20. Sri Chandra Mohan Prasad,  
P.O.: ...  
Dist: ...

21. Sri Spinaki Sinha,  
Vill/P.O: Aurai,  
Dist: Midnapore.
22. Sri Gupateshwar Nath,  
Ashra,  
Arabindapally,  
Ichnapur,  
P.O: Ichnapur Nawabganj  
24 Parganas (N).
23. Sri Anrighu Nath Ram,  
87/1 Cossipore Road,  
Calcutta - 2,  
PIN: 700002.
24. Smt. Puspa Ghosh,  
41/W. Pulia Colony,  
P.O: Pulia Township,  
Dist: Nadia.
25. Smt. Shanti Hansdak,  
C.L./95 (New),  
Type II/, Ichnapur,  
P.O: Nawabganj,  
Ichnapur,  
Dist: 24 Parganas,  
West Bengal.
26. Sri Raj Deo Ram,  
Ar.196 The park  
Ichnapore,  
P.O: Nawabganj,  
Dt: 24 PGS (N)  
West Bengal.
27. Sri S.R.Singh,  
165 The park,  
Ichnapore,  
P.O: Nawabganj,  
24 PGS (N).
28. Sri Bindayal Prasad,  
1-9 Ty-III The park,  
Ichnapore, 24 PGS.
29. K.A. Bagchi,  
Docterpara,  
Bund Bar,  
P.O: Ichnapur,  
Nawabganj, Ichnapur,  
24 Parganas (W.B.)
30. Sri Radhika Raman Thakur,  
14/1/IE, Asgar Mistri  
Lane,  
Calcutta - 700 046.
31. Sri Lakhraj Ram,  
H/O Kalkatti Jaisawara,  
G.P. Road, Maniktala,  
Ichnapur - 24 PGS (N).
32. Sri Taraknath Yadav,  
38/11 Eastland Type-II  
P.O: Bengal Enamel,  
Dist: P.G.S.(N).
33. Sri Abhimanyu Singh,  
23/1 Cossipore, Road,  
Calcutta - 2.
34. Sri D.C.Bhuiya,  
Satinsen Nagar,  
P.O: New-Barrackpur,  
Dt: 24-Parganas (N).
35. Smt. Kalyani Sen Gupta,  
Sreepalli Palta,  
P.O: Bengal Enamel,  
Dist: 24 Parganas (N).
36. Sri Kumud Ranjan Mondal.  
Mulanpalli,  
Mridaypur,  
Barasat, 24 Parganas (N)  
West Bengal.
37. Sri S.K.Datta,  
Vill - Lalpur(Padmapukur)  
P.O: Chakdaha,  
Dt: Nandia (W.B.)
38. Sri S.P.Kumar,  
GSF High School,  
Cossipore, Calcutta,  
PIN: 700002
39. Smt. Portia Murmu,  
G.S.F. High School,  
Cossipore,  
Calcutta - 700 002.

40. Smt. Bijali Barman,  
G.S.F. High School,  
Cossipore,  
Calcutta - 700 002.
41. Miss Bejoy Garh,  
10/66,  
Calcutta - 32.
42. Miss Gopa Roy,  
13 Nivediasarnee,  
Sisir Lodge,  
Calcutta - 700 075.
43. Smt. Jyotsna Bhattacharjee,  
G.M.C. Garden Road,  
Calcutta - 700 030.
44. Smt. Kalpana Biswas,  
64/2 Laksmi Narayan Road,  
Dumdumcant,  
Calcutta - 65.
45. Smt. Chitra Chatterjee,  
2F, Panditia Road,  
Calcutta - 2g,  
PIN: 700 029.
46. Sri G.P. Basu,  
156/1, M.N.K. Road (south),  
Flat No. e 002,  
Calcutta - 36.
47. Sri Om Prakash Mishra,  
H/O - Parmeswar ~~Sax~~ Saaw,  
N.B. Road, Kharadah,  
P.O: Kharadah (N) 24 PGS.
48. Sri Yadunath Ram,  
45A/10 Estate,  
Dum-Dum,  
Calcutta - 28.

REGIONAL COLLEGE OF EDUCATION, BHUBANESWAR.  
DEPARTMENT OF EDUCATION

Inservice Training Programme for High School Teachers of Indian Ordnance Factory, Ministry of Defence, Government of India in Core Areas of Education to be held at OFTI, Ishapore-743144 (West Bengal) from 29.6.92 to 8.7.1992.

PROGRAMME SCHEDULE

Date and Day	Time	Topics	Resource Person
29.6.92 (Monday)	10AM-11AM	Registration of participants & Inauguration	
	11AM-12Noon	Objectives of the Programme	Dr.D.K.Bhattacharya
	12Noon-1PM	Professional Ethics and Code of Conduct of Teachers I	Dr.P.Purehit
	1PM-2.30PM	L U N C H	
	2.30PM-3.30	Teaching and Educational Objectives	Dr.P.Das
	3.30-4.30	Current Trends in School Education	Dr.D.K.Bhattacharya
30.6.92 (Tuesday)	10-11 AM	Taxonomy of Educational objectives in Behavioural Terms	Dr.P.Das
	11-12noon	Professional Ethics & Code of Conduct of Teachers II	Dr.P.Purehit
	12-1 PM	Child Centred Education	Dr.D.K.Bhattacharya
	1-2 PM	L U N C H	
	2.30-3.30	Criteria of Good Evaluation	Dr.P.Das
	3.30-4.30	Group Discussion	Dr.P.Purehit
1.7.92 (Wednesday)	10-11 AM	Minimum Levels of Learning	Dr.D.K.Bhattacharya
	11-1 PM	Procedure of Evaluation	Dr.P.Das
	1-2.30 PM	L U N C H	
	2.30-3.30	Core Teaching Skills (Stimulus Variation)	Dr.D.K.Bhattacharya
	3.30-4.30	Accountability of Teachers I	Dr.P.Purehit.

Date and Day	Time	Topics	Resource person
2.7.92 (Thursday)	10A.M - 11.45AM	Core-Teaching Skills (contd.)	Dr.D.K.Bhattacharya
	11.45AM-1.00PM	Continuous, Comprehensive Evaluation	Dr. P. Das
	1.00PM -2.30PM	L U N C H	
	2.30PM-3.30 PM	Innovations in Education I	Dr.P.Purohit
	3.30PM -4.30PM	NPE(1986).An Overviewed	Dr.D.K.Bhattacharya
3.7.92 (Friday)	10AM -11.30AM	Core-teaching skills (Contd.)	Dr.D.K.Bhattacharya
	11.30AM-1 PM	Tools & Techniques of Evaluation	Dr. P. Das
	1 PM - 2.30PM	L U N C H	
	2.30PM-3.30PM	Innovations in Education II	Dr.P. Purohit
	3.30PM-4.30PM	Institutional Planning	Dr.D.K.Bhattacharya
4.7.92 (Saturday)	10AM - 11AM	Development of Test Items	Dr. P. Das
	11AM - 12Noon	Value Education in Schools	Sri G.S. Hati
	12Noon-1 PM	Guidance for Mental Health in Schools	Dr.S.P. Anand
	1 PM - 2.30PM	L U N C H	
	2.30PM-4.30PM	Accountability of Teachers II	Dr. P. Purohit
5.7.92 (Sunday)	10AM - 11 AM	Value Education	Sri G.S. Hati
	11AM - 12Noon	Teacher Effectiveness	Dr.S.P. Anand
	12Noon-1PM	Role of Educational Technology	Dr.P. Purohit Dr.D.K.Bhattacharya
	1PM - 2.30PM	L U N C H	
	2.30PM-3.30PM	Teachers as facilitator of Learning	Dr.D.K.Bhattacharya Dr. P. Das
	3.30PM - 4.30PM	Motivation and Learning	Dr. B.N. Roy

			x
		Topics	Resource Person
1.7.12	10.00 - 11.00	Diagnostic Testing & Remedial measures	Sri G.S.Hati
	11.00 - 11.30	Action Research in Schools	Jr. S.P.Anand
	1.00pm-1PM	Construction of achievement test items in school subjects	Dr. P. Das Dr. P.Purohit
	1.30 - 2.30PM	L U N C H	
	2.30PM-3.30PM	Problem solving Approach	Dr. B. N. Roy
	3.30PM-4.30PM	Communication and Learning	Dr.SP Bhattacharya
1.8.12	10.00 - 11AM	Guidance & Counselling in Schools	Dr. S. P. Anand
	11AM. - 12Noon	Discovery approach to teaching-Learning	Sri G. S. Hati
	1.00pm-1.30	conditions for Promoting Learning	Dr. B. N. Roy
	1.30 - 2.30PM	L U N C H	
	2.30PM.-3.30PM	Development of progress report card for recording scholastic & Non-scholastic dimensions of growth	Dr. P. Das Dr. P. Purohit
	3.30PM-4.30PM	Instructional Strategies	Dr.SP.Bhattacharya
1.9.12	10AM - 11AM	Evaluation of Attitude and values	Dr. B. N. Ray
	11AM. - 1.00pm	Planning for Teaching School Subject	Sri G.S. Hati
	1.00pm-1PM	Valedictory Function	

1.10.12

10.00 AM - 11.00 A.M

3.30 P.M

(Dr.D.K.Bhattacharya)  
Programme Director

## The Approach Paper

Consequent upon the request of Indian Ordnance Factory Board, Ministry of Defence, Govt. of India, Regional Office, Bangalore, a constituent unit of National Council of Educational Research and Training, New Delhi, in August 1997, the Ministry of Human Resource Development, Govt. of India has designed the outline of the Inservice Training Programme for High School Teachers of Indian Ordnance Factory Board in Core Areas of Education to be held at OFTI, Ishapore-713111(WB) from 29.6.97 to 8.7.97.

The National Policy of Education, 1986, Programme of Action (POA) on NPE, 1986, and subsequent Committee Reports like Ram-murthi Committee Report (1989) and Reddi Committee Report (1991) are a few significant events in the area of educational development in the country. All these policy statements and reports have highlighted certain changes in the core areas of education related to teaching-learning at secondary school level and have visualised a significant role of teachers in implementing various tasks related to changed perspectives of teaching-learning. The changed dimensions in core areas of education and emerging dimensions of teachers role arising out of policy statement and subsequent developments would necessitated reorientation of teachers so that the teachers could be sensitized in the areas of reform and these are properly implemented.

The in-service Training programme for High School Teachers has the following objectives.

- (1) To inculcate in the teachers an awareness about recent trends and innovations related to teaching-learning at secondary school level.
- (2) To help the teachers to understand the dynamics of Teaching-learning at secondary level.
- (3) To inculcate skill and competencies in teachers in emerging methodologies to encounter the increasing complexities of class room teaching-learning.
- (4) To help the teachers to devise appropriate method of communications in the class room and in the out of the class room activities relevant to the needs of the students.
- (5) To acquaint the teachers with various emerging strategies of evaluation for learner's competency.
- (6) To make the teachers aware about various aspects of professional ethics and accountability of teachers.
- (7) To help the teachers to understand various aspects of institutional planning.

Keeping these objectives in view, the programme transformation could be grouped under the following operational heads :-

- (1) Definition of educational objectives.

- (1) ... training in the class room.
- (2) ... tools for effective teaching-
- (3) System of Evaluation and feedback.
- (4) Innovations, recent trends and action research.
- (5) Accountability and Professional Ethics of the Teachers.
- (6) Planning and Management.

... each operational heads have been ... transaction as shown in time-

... training in Methodology of a particular subjects.

.....



Motivation and Learning

Prof. Biswanath Roy  
 Field Adviser (NCCRT)  
Calcutta- 700014

In course of several research works, educational psychologists have agreed to the fact that motivation is an important condition for learning. Strong motivation maximises mental activity in general and learning is specific. As a result, it has become necessary to know what is motivation and how one can be motivated.

Motivation is considered as the active and driving force in an individual which makes the individual seek or want fulfilment of his needs, moods, wishes and desires. The issue of how one can be motivated comes next. This has given rise to the concept of achievement motivation, briefly known as MAch.

Achievement motivation starts with the concept of achievement imagery (AI), doubtful imagery (TI) and unrelated imagery (UI). The concept of AI is considered as the most useful one, where it may be found that the individual has a positive goal in view for achievement. On the otherhand, TI and UI are considered as no goal in view. Such imageries are measured either by IAT (Pictures) or other kinds of tests.

Once AI is found in an individual, he is further studied for knowing his needs (N), instrumental activities (I) BW ( blocks from outside world), Bp ( personal blocks), H (help from others), G( +) and G (-) as positive and negative emotion, Ga (+) and Ga (-) as goal anticipation of success (+ ) and failure(-)

It has been noticed that individuals with high achievement motivation suffer from both hope of success and fear of failure. This is true in case of high achieving learners also. Sometimes high expectations of the parents, teachers and peers also create such an ambivalence in the learner.

Certain experiments on the increase of MAch in learners have lead to the following framework:

- (1) To develop a desire to work towards some standards of performance which may be either externally or self imposed.
- (2) To develop goal directedness in terms of definite vocational goals.
- (3) To develop appreciations of the fact that goal achievement needs constant efforts to overcome personal and external constraints.
- (4) To promote thinking about and to try to strengthen the following characteristics in learners:

- 4.1. Sense of responsibility : Owing to the fact that they are responsible for their own self interest.
- 4.2. Careful planning and carrying out study activities.
- 4.3. Intelligent use of time: Understanding value of time.
- 4.4. Regular work habits.
- 4.5. Readiness to accept feedback on one's performance, willingness to undertake new activities, know and discuss performance with all others.
- 4.6. Feel free to ask questions and raise doubts about classroom activities.

Such studies had lead toward the use of social reinforcements for motivating and improving and academic performance of learners. It was found that apart from high achievers, high percentage of middle range achievers had significantly improved their level of academic achievement. The percentage of improvement among the low achievers were insignificant. Social reinforcements like verbal appreciation, notings on the answer books, frontal sitting arrangement etc. were found to be useful.

The ultimate goal, however, is to create self- motivation in the learner which in turn will generate the will- to- learn. As such self- motivation and will- to- learn will create self- learning and effective learning mechanisms in the learner. After all, nothing fails like failure and nothing succeeds like success.

.....

## Conditions for promoting learning

Prof. Biswanath Ray  
Field Adviser (NCEPT)  
Calcutta-700014.

Modern educational research has come out with several conditions which promote learning. The objective however, has remained to be the enhancement of learner's involvement and satisfaction in learning and academic achievement. A school going learner spends roughly around six hours in the school, which is 25% of the total time. Even then, school climate, the text book, the teacher behaviour like friendly encouragement and guidance, the teaching style, teacher-pupil relationship etc., create serious impacts. In home, the home environment, parents attitude toward education, guidance from parents and co-siblings if any, are also of high importance. All these create a kind of learning atmosphere around the learner to promote his involvement and satisfaction in learning and achievement.

In addition to the above mentioned conditions, some other conditions can also be considered which are largely teacher dependant. For example :

### 1) Organisation and presentation of learning material :

This is necessary to adopt a teaching style, one mode of presentation or the other for greater teaching effectiveness. Different teaching styles may be adopted for different teaching-learning materials.

2) Learning activities : This envisages learner's identification with learning material. Individual differences will beed recognition.

3) Testing : Having direvice, selective and motivating functions.

4) Guidance : may either prevent or correct probable errors of judgement depending upon time, place and person.

5) Emotional and social climate for learning : grows out of the concern of the school for the total well being of the learner.

Learning conditions, however, are very much dependent also upon the ability, aptitude and activity of the learner. Intelligence & socio-economic status contribute quite effectively toward academic achievement as well as skill development. The whole gamut of psychological testing is meant for such purposes. Probability of greater success in learning is also dependent upon the motivation of the learner.

However, the main point of contention is pupils' perception of a "good" teacher. For example, pupils will always prefer to find the teacher as nice, kind, fair, friendly, understanding etc. Knowledge about subject matter, clearness, of expression & explanation, modest & neatly dressed, does not nag, ridicule or speak sarcastically, does not use threats frequently to maintain discipline, insists upon the completion of homeworks etc., are also important.

The above mentioned teacher characteristics are supposed to create good classroom climate congenial for learning, without any process loss in teaching-learning situation. Thus there can be reduction in teacher phobia or school phobia and increased motivational condition for learning. It is considered that the teacher himself could be as such that his very presence will become the most important condition for promoting learning. Therefore, teachers' roles become of prime importance.

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Prof. Biswanath Roy  
Field Adviser (NCERT)  
Calcutta- 700014.

It is a well known usage that life is nothing but a chain of problem solving activities. Any individual is faced with any number of problems to be solved for an effective life and living. As such, problem solving has been considered as a framework or pattern within which creative thinking and reasoning takes place. Observation, prediction and inference are the three important steps involved in problem solving approach. Successful problem-solving and successful living are analogous. Culture itself is but a record of how our ancestors have solved various problems.

Problem solving approach is a fundamental axiom in the learning process. Learning involves problem solving by the learner. Many educational psychologists have found out that approach to solve the problems can have the following steps:

- (1) Understanding the problem : To understand carefully and exactly the nature of the problem, its context and content. This is necessary to eliminate useless efforts.
- (2) Collecting information and data :  
It may be that earlier approaches to solve a problem are available. These may serve as reference material.
- (3) Formulating possible solutions or hypotheses :  
This step is important for the fact that there may be some relationship between the past and the present method of solving the problem.
- (4) Evaluating the possible solutions :  
Imagination, prediction by trial and error to understand the difficult ways of approach are important.
- (5) Trying or testing possible solutions of predicted VALUE :  
Consider the variables for experiment, observation and inference to establish the value of the approach.
- (6) Forming conclusions : For immediate purpose or a long term purpose.

It can be, however, stated that problem solving is a process of overcoming difficulties that appear to interfere with the attainment of a goal. It is a procedure of making adjustments in spite of drawbacks.

The problem solving approach may involve the following behaviours also :

1. Unlearned or habitual behaviour
2. Trial-and-error behaviour
3. Insight behaviour
4. Vicarious behaviour
5. Behaviour designated as "The scientific method".

As a result, the learner learns to recognize a fact in original to make accurate evaluations about his ways of testing his thinking. Roles of identification of need, reward and punishment, complexity level and their interaction may motivate the learner to attain the desired level of excellence.

Definitions of the term value are scarce and imprecise. However, value has been considered as a degree of worth ascribed to an object or activity or class thereof. Generally the degree of worth is ascribed by the possessor of the attitude on the basis of instrumentality of the object for the facilitation or inhibition of goal achievement. Values lie at the root of attitude development through affective reactions.

Measurement of attitude and values have produced reliable and valid scales constructed by the methods suggested by Thurstone, Likert, Guttman, etc., each having variation in approach. However, evaluation needs a fresh look through either "good" or "bad" and how much of a particular attitude or value will be acceptable according to individual, group or social norms. Due to differences, clash of attitudes and values have always created problems failing to define what is good or bad attitude and value, other than constitutional values & socially acceptable ones.

1) Love for the country, 2) Secularism, Democracy, Equality of opportunity, 3) Dignity of labour, 4) Ethics and Morality, 5) Discipline, Tolerance, Help.

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## CORE TRAINING SKILLS : AN INNOVATION

Dr. D.K. Bhattacharjee,  
Regional College of Education  
Bhubaneswar.

## Theoretical Rationale :

The recent attempt to define teaching in behavioural terms is an innovation. The teaching can be defined as a complex set of classroom behaviour of the teachers. Whatever the teacher does in the classroom, for example lecturing, questioning illustrating, giving examples, using audiovisual aids, reacting to student's response etc. for the production of effective learning could be treated as classroom behaviour of the teacher. Again, due to individual difference the teachers behave in various ways in various teaching-learning situations. The same teacher may behave differently under different conditions. Any way, the pattern of teacher behaviour in the classroom has great influence on the learners. Any human behaviour can be modified through practice. Similarly, the behaviour of the teacher can also be modified through practice. The modification of human behaviour has various purposes. Similarly, the purpose of the modification of the classroom behaviour of the teacher is to make him efficient in organising various teaching-learning tasks. Whenever a person modifies his behaviour pattern in order to become efficient in performing a task we say that he has acquired skills in performing a task. In order to achieve success in any profession a person is to acquire certain basic skills. Similarly, in order to achieve success in teaching profession, a teacher is to acquire certain basic skills by improving or manipulating his classroom behaviour. Since the teaching involves a complex and interrelated sets of behaviour patterns, which occurs at various levels of interaction with various types of learners, a teacher cannot modify all his classroom behaviour at a time and thereby acquire all the teaching skills simultaneously. Therefore, the specific teacher behaviour in the classroom related to a particular teaching skill is to be identified, isolated and improved. A student-teacher is able to acquire one specific teaching skill at a time through modification of certain behaviour patterns that comes under the purview of that specific teaching skill. Thus skills acquisition is a programme designed to modify the classroom behaviour of the teachers. The use of teaching skills helps the teacher to involve a large numbers of learners in teaching-learning strategy, to take care of individual learners, to replace the lecturing by learning through doing. During the training phase student-teacher should acquire the teaching skills one by one in a systematic way. But after the training when he is placed in a school situation he selects the appropriate skills, integrates them with a specific content area and applies to the classroom situation in order to implement a specific teaching-learning task. Here lies the line of demarcation between training and teaching. The selection of relevant teaching skills and their style of integration would depend on the nature of the content area, the ability of the teacher, the requirement of the classroom climate and the demands of methodology.

Skill acquisition programme for the school teachers was first undertaken in Stanford University Teacher Education Program. Allen and Royen (1969) could visualise fourteen representative teaching skills for teaching various school subjects at different levels. They had emphasized specific teaching skills in connection with the micro-teaching programme introduced in Stanford University.

Thus the exposure of the student-teachers to core training skills would enhance the effectiveness of the training programme. The student-teachers could acquire the skills one by one. The core training skills should be inculcated to the student-teachers through micro-teaching sessions. The micro-teaching sessions could be organised by the teacher training institutions as per the following strategy.

**Concept Clarification** - The teachers are to be oriented in micro-teaching concepts, various skills, their components, cycle of teaching, type of the classroom, size of the classroom, the technique of observing the skills and feedback procedure.

**Evaluation of the Skill and Feedback** - The performance of the teachers should be evaluated either by the supervisors or by the peer group by dint of specially designed observation schedule. The feedback is to be given immediately either by college supervisors or by peer supervisors on the basis of the quantification of specific teacher-behaviour to a particular skill. In observation schedule the supervisor can record the performance of the student-teachers by putting tallies against the various components of a particular skill.

The existing traditional practice teaching or the internship programme could be replaced by core training skills. The teacher educators are to be oriented in this area of innovation. There is an urgent need to develop guide, model lessons on various skills in different method subject areas and supervisors observation schedule. Whenever possible, video-tapes, television and film strips should be used for demonstration of the core training skills. The university authorities should initiate necessary modifications in the practice teaching programme or internship programme by giving statutory sanction to the introduction of core training skills.

**Core Training Skills : Their Nature** - A number of teaching skills have been identified and prescribed by the teacher educators recently for their inclusion in the training programme. The following teaching skills should be designated as 'basic skills' and they should be incorporated in the secondary school teachers training programme in order to enhance their effectiveness and competency in teaching-learning.

**The skill of introducing a lesson** : Introduction is a skilled art. The technique of introducing a new learning experience in the shape of a lesson to the learner involves skill and expertise on the part of a teacher. When we confront new situation or new experience in our life, tension and anxiety develop. The same is the situation with a learner. Whenever he confronts the unfamiliar learning experience he suffers from tension and anxiety in the beginning. This initial tension and anxiety may reduce the motivation, the level of interest and the span of attention of the learners. Now it is the duty of the teacher to relieve the learner from initial tension and to inculcate motivation by skillfully introducing the lesson. As a matter of fact skillful introduction of the lesson sets the tone of the lesson. If the learner is motivated by the beginning performance of the teacher he will definitely be further interested and curious to know the subsequent aspects of the lesson. In order to introduce a lesson the teacher is to perform the following functions:

- 1) The teacher is to inculcate attention, interest, curiosity and motivation in the learner so that he becomes ready to accept new learning experiences.

- /teachers
- ii) The teacher is to establish a bond between the familiar and the unfamiliar, the concrete and the abstract learning experiences.
  - iii) The teacher is to establish rapport with the learners so that they are able to perform their learning activities related to cognitive, affective and psychomotor domain in an effective way.
  - iv) The skill of introducing the lesson involves the dramatic formulation of the teachers activity based on imagination and enterprise.
  - v) The skill of introducing the lesson involves the dramatic formulation of the activity based on imagination and enterprise.
  - vi) The activities performed by the teacher during introducing a lesson should be relevant to the main theme of the topic which he is going to teach.
  - vii) During introducing a lesson the teacher should assure the learners that the learning activity will be interesting. This assurance helps the teacher to establish quick rapport with the learners.
  - viii) The teacher should promise reward for sustained attention and interest of the learners.

The following classroom behaviour of the student-teachers can be isolated, identified and modified during the training programme in order to equip them with the skill of introducing the lesson :

- i) The teacher lectures/questions/illustrates/demonstrates on a phenomena or an event or an object from familiar to unfamiliar sequence.
- ii) The teacher narrates/lectures/questions/illustrates/demonstrates/analyses the phenomena or the event or the object from concrete to abstract sequence.
- iii) The teacher activity is dramatic. Dramatic elements could be introduced by modulation of the voice, use of various educational technology devices or audio-visual aids.
- iv) The teacher promises reward for sustained attention and interest of the learners.
- v) The teacher assures the learners that the learning activity will be interesting.

The skill of the questioning - Questioning is an important teacher behaviour, which acts as a stimulus in the classroom situation and thereby facilitates learning. Appropriate frequency of different types of questions helps critical analysis and clarification of concepts, principles, nature of phenomena and events. It also promotes effective classroom interaction through involvement of maximum number of learners in learning activities. It also helps the systematic management of classroom activities. Questioning cannot be treated as method of teaching. It is a skill which supplements the lecture/explanation/illustration/demonstration/use of audio-visual aids/story telling problem solving and other related teacher behaviours in the classroom. As a matter of fact, questioning should be integrated with various teaching methods and content in a systematic way.



The Characteristics : The skill of questioning should have the following characteristic features :-

i) Effective questioning should be micro concept based. Questioning should aim at clarifying a small concept. The question which tries to clarify more than one concept at a time becomes complex and confusing.

ii) The language of the question should be simple and unambiguous. Vague question may create confusion. If the question is vague the learners may ask the teacher to repeat it and consequently, valuable time is wasted.

iii) Minimum possible words should be used in framing a question so that it becomes specific, brief and pinpointed. The use of minimum words in a question helps the teacher to focus the learner's attention quickly on the concept.

iv) The questions should be audible to all.

v) While framing a question the teacher should consider the maturity level of the learners belonging to a particular class.

vi) An optimum number of learners should be involved in the questioning. The questions should be properly distributed to all types of learners sitting in different corners of the class.

vii) Only one question should be asked at a time. The asking of two or three questions at a time may confuse the learners.

viii) The questions should be asked in logical sequence.

ix) The teacher should name a boy and then ask a question or after asking a question he may ask the learners to volunteer.

x) The teacher should take a pause for a few seconds before asking a question in order to draw attention and interest of the learners.

xi) On many occasions the learners ask questions to teachers. The teacher either can give answer or can redirect it to some other learner. The teacher should give both verbal and non-verbal complements to the learner for asking questions.

xii) The teacher should give his opinion after he gets answer from the students. The students are curious to know whether their response is correct or not.

xiii) The students should be allowed to think for a few seconds after questioning.

xiv) Repetition of the same question by the teacher should be avoided.

An effective teacher formulates various types of questions at different stages of the lesson. As a matter of fact, each question should have a clear-cut purpose. While introducing the lesson the teacher may ask motivation questions or the questions in order to test the previous knowledge of the learner. During the presentation stage the teacher may ask variety of question to the learner in order to test their ability to recall and recognise the facts, their level of understanding or comprehension and their ability to make analysis, synthesis and to evaluate. During this stage the teacher may also ask question to test the affective domain of the learner i.e. the pattern of interest, attitudes, appreciations and values. During this stage of the lesson the teacher should ask application question. The types of the questions to be asked during various stages of the lesson would depend on the nature of the content area, the maturity level of learners, and the relevancy of specific characteristics of cognitive and the affective domain of the learner to the content areas.

Questioning-its various forms : Each question should be asked for specific purpose. The purpose of questioning is determined by the needs and the requirements of the lesson. Generally the teacher should ask the following types of questions:

i) Questions to measure Information Processing Ability : The teacher may ask information processing questions in order to judge the capacity of the learner to recall the knowledge i.e. recall of specific facts, concepts, rules, principles, phenomena, events, conditions, structure, pattern, classification and categories etc. The information processing question may ask the learner also to recognise the knowledge i.e. recognition of facts, concepts, rules, principles, phenomena, events, conditions structure etc. It is through recall and recognitions the learner processes the informations.

ii) Communication Translating Ability Measuring Questions : After discussion, demonstration, experimentation or any other type of communication the teacher may ask question to the learner to measure the ability to translate the communication in some other form. The learners may respond to such question through verbal response or through some psychomotor task.

iii) Interpretation Questions : The teacher may ask the learner to interpret some fact, event, phenomena or an object. The learner may interpret an event or an object in various ways.

iv) Thought Provoking Questions : The purpose of this type of questioning is to judge the learner's ability to generalise the conclusions or to draw inferences or to find out the implications of the conclusions.

v) The Questions to measure the Application Ability : By application ability question the teacher tests the ability of the learner to apply the recently gained knowledge in new learning situations

vi) Questions to measure Analytical Ability : The analytical questions demand-s that the learner is to analyse the whole object, event, phenomena or structure into various parts or components or elements.

vii) Rephrasing questions : When the students are not able to answer a question due to its difficulty value, the teacher should rephrase the language of the question in order to make it easy. The teacher may ask a leading question also.

viii) Questions to test the Judgement Ability : The teacher should ask judgement question in order to test the judgement capacity of the learners about the relevancy, significance and validity of the objects, events and phenomena etc.

ix) Questions to measure synthesis ability : The teacher may ask the learners to combine the separate parts or elements or substances into a whole or into a system in order to present them as a totality.

x) Questions to measure attention and interest : Certain questions may test the level of attention and interest of the learner during classroom communication.

xi) Questions to test the willingness to interact : The teacher might ask question in order to measure the willingness of the students to interact to class communication.

xii) Motivation Questions : Motivation questions are used during the introduction stage of a lesson. While introducing the lesson the teacher is to motivate the learner. In order to motivate the learner the teacher asks questions on known facts, familiar concepts and concrete life experiences.

xiii) Opinion Questions : The opinion questions are asked to test the learner's views, reaction, opinion, beliefs or attitudes to certain issues.

xiv) Complete information questions : After the teacher asks a question, the student responds. Now if the response of the learners does not cover all the required informations, the teacher may ask fresh questions to another learner in order to focus his attention to some other aspects of the problem. Till the teacher gets the complete informations about all the aspects he should go on asking questions to the same learner or to number of learners for more and more informations.

xv) Development questions : The questions should be asked in a systematic hierarchical sequence. The teacher may develop a concept or an idea through systematically and hierarchically arranged sequential questions.

xvi) Repetitive questions : The teacher may repeat the same question to another learner either in order to verify the response of one learner by other learners or to test the level of attention of the learners.

The types of questions as discussed above are related to both cognitive and affective domain of the child overlaps while he reacts to various questions of the teacher. But the effective teacher should formulate the questions in such a fashion that he is able to measure the specific attributes of both cognitive and affective competency of the child. The teacher should plan a democratic classroom so that the learners are able to react and to put questions in an atmosphere of freedom.

**Skill of Reinforcement :** Reinforcement is an important technique to motivate the learners and to ensure their active participation in teaching-learning activities. The behaviouristic psychologist Skinner's work has emphasized the importance of reinforcement in maximising learning. If a particular behaviour is reinforced, it is likely that its frequency would increase considerably. On the otherhand if a particular behaviour is not reinforced, it is likely to disappear. The response of the students or the level of students' participation or the level of students' engagement in learning activity reflects the behaviour pattern of the learners. The teacher can reinforce the students' participation in learning activity and can also withdraw reinforcement. Teacher's reinforcement may be either positive or negative. Teacher's encouragement or praise is known as Teacher's positive reinforcements. Teacher's encouragement improves the quality of student's classroom performance manifested through more response, response having originality, good guess and imagination, active participation, active interaction, active engagement in completing a specific learning task within prescribed time limit, continuous rapid progress, sincere attempt, attention, discipline and courtesy etc. On the otherhand, teacher's criticism or discouragement is known as teacher's negative reinforcement. Teacher's criticism decreased the quality of the student's classroom performance manifested through lesser response, response lacking originality, and imagination, lesser participation and interaction, withdrawal from engagement, inability to complete learning task within prescribed time limit, slow progress, poor effort, inattentiveness, misbehaviour and tendency to break the rules etc.

Teachers encouragement should be direct and in the form of small statements. The teachers should be very much careful so that the reinforcement statements do not become mannerism. Teacher should use a variety of phrases to encourage the learners. The verbal encouragement should be supplemented by non-verbal communication of approval. The teacher can offer words, phrases, small sentences which are signs of cheerful verbal statements of affirmation, for example, 'very good answer', 'very fine response', 'extremely good', 'extremely nice', 'fine', etc. On the otherhand, the teacher should not use negative verbal reinforcements such as the words, the phrases and the sentences like, 'no', 'wrong', 'your answer is meaning less', 'you are talking non-sence', 'you are doing non-sence', etc. Reinforcement could also be given through non-verbal communication of approval like affirmative head nodding, appreciative look at the attentive learners, for good works done by the learners and for listening carefully the response etc. The nature and the frequency of the use of reinforcers should depend on the nature of the performance of the learners. Thus the teacher behaviour acts as reinforcers for enhancing the level of motivation and for formulating a purposive classroom interaction.

The learning environment could also act as reinforcers. The reinforcement could also be given through appropriate planning of learning task. The peer group or the classmates also can reinforce the learner. The organisation of group learning may facilitate group approval or group encouragement of the effort of the individual learner.

The skill of using a black board : In our country most of the secondary school have not been able to use sophisticated and costly teaching aids in teaching-learning due to financial stringency. Specially most of the rural schools are so ill-equipped that they may not be able to use the latest devices of educational technology in order to improve the teaching-learning even at the end of the current decade. Consequently, the black board would continue to occupy an important place in teaching-learning as a nonprojected teaching aid. Therefore, the teacher-training programme should equip the student-teachers with the skill of using a black board.

The use of black board is helpful to a teacher for the reasons stated below :-

- i) Black Board is less costly and all schools are able to provide atleast one black board in each class.
- ii) Teaching along with the use of black board can enhance the level attention and interest through activitisation of two senses i.e. observation and listening.
- iii) The black board helps the teacher to explain various concepts, rules, principles, informations pointwise in a logic sequence or for making summary of the lesson at the end of teaching.
- iv) The black board also helps focussing. The teacher can focus the attention of the learners on new terminology, phrases, formulas, important aspects of a concept, informations or rules etc.
- v) The blackboard helps the teacher to switch over from the abstract concepts to the concrete concepts, from the unknown ideas to the known ideas. In order to make the abstract or unknown concepts concrete and known the teacher can draw pictures, symbols, diagrams, sketches, maps, graphs on the blackboard. The drawing of pictures, diagrams, sketches or maps are very much useful in history, geography, mathematics and science classes.

vi) The blackboard can also be used for writing student's response either for its verification or as a technique to reinforce their correct response.

vii) The blackboard helps to enhance the learner's participation in teaching-learning. The teacher may invite a learner to the black board either to write or to draw something related to the lesson in order to judge his ability to face a group situation and his level of knowledge, understanding and skill.

The blackboard writing is an art. It has the following characteristics :

- i) The blackboard writing should be visible from all corners of the classroom. Clear visibility depends on clean writings and proper placement of blackboard in the class. Before it's use all writings should be erased properly by the teacher.
- ii) A concept is divided into a number of sub-concepts. At the end of the discussion in regard to various sub-concepts a brief statement concerning their nature should be written on the blackboard serially under the board heading of the concerned sub-concept.
- iii) Sufficient care should be taken about the distinctness of each letter, word and sentence and all words, letters and sentences should follow a straight line towards right direction of the teacher's hand. There should be sufficient spacing between various words, and between various sentences so that the learners are able to read it distinctly.
- iv) The teacher can focus important words, phrases, sentences or any aspect of the concept by using coloured chalks. The use of coloured chalks makes the diagram, the symbols, the pictures, the maps and the figures attractive.
- v) Briefness and specificity helps in sustaining learners attention. Only brief and specific points should be written on the blackboard. Details writing may detract the learner's attention.

The teacher should acquire various aspects of the skill of blackboard writing systematically so that he is able to produce effective teaching-learning even without use of sophisticated audio-visual devices.

The skill of explanation : The student-teachers should acquire the skill of explanation in order to influence the comprehension ability or the ability of understanding of the learners and thereby to enhance their cognitive competence. The skill of explanation should be used in order to clarify the complex nature of various concepts related to the content areas of various subjects. If the concept is beyond the cognitive competency of learners, they may fail to understand its proper meaning and nature. The teacher is to explain the meaning, the nature and the dimension of the concepts so that the learners understand it. Thus the main purpose of the use of the skill of explanation is to help the learners to comprehend or to understand. In order to explain a concept the teacher is to perform the following tasks :

The tasks :

- i) A concept is composed of a number of sub-concepts. The teacher is to identify and isolate various sub-concepts and explain these in logical sequence.

- ii) Each sub-concept has certain significant aspects. The teacher is to identify the significant aspects of various sub-concepts and focus the learner's attention on them. Focussing could be done either through verbal explanation or gestural explanation or explanation through audio-visual devices. Thus, the teacher should be able to discriminate between significant and non-significant aspects of the sub-concepts for effective focussing.
- iii) The teacher should give specific and relevant examples of illustration to explain the concept of a phenomena, an event or an object. The examples and illustrations facilitate explanation.
- iv) Specificity is using languages facilitates verbal explanation. The teacher should use specific words, phrases and sentences during the process of verbal explanation.
- v) The teacher should explain new terminology related to various sub-concepts, if any, during the process of explanation.
- vi) The teacher should test the entry competency of the learners or the previous knowledge before he starts the task of explanation.
- vii) The explanation should not be started abruptly. The teacher should give preliminary ideas, hints or clues about the concept before the explanation starts.
- viii) Verbal explanations should be supplemented by the explanation through audio-visual devices. The learners should be exposed to concrete objects through audio-visual aid or demonstration.
- ix) The teacher should identify the cause and effect relationships and should offer reasons during the process of explanation.
- x) The teacher could compare, contrast and classify various objects, phenomena and events during the process of explanation.
- xi) The teacher should generalise the conclusions of the explained concepts.
- xii) The teacher should also interpret the implications of the conclusions that has emerged as the byproduct of explanation.
- xiii) The teacher should encourage the learners to explain various objects, phenomena, events related to different sub-concepts in their own language. From the explanation of the students, the teachers would get an idea about the effectiveness of his explanation and the teacher may formulate strategy for feedback.

The skill of illustrating with examples & The skill of illustrating with examples helps the student-teachers in explaining or clarifying various abstract concepts related to the content areas of various subjects. The skill of illustrating with examples plays a significant role in various teaching methods like inductive, deductive, questioning-cum-discussion, demonstration and problem solving. In inductive approach the teacher starts his activity by giving a number of specific examples in order to illustrate a concept related to a phenomena, an event, an object, a rule or a principle. The teacher concludes his activity by drawing conclusions about the nature of the concept on the basis of the examples given. In deductive approach the teacher starts his activity by stating the salient features of the concept. Subsequently, the salient features of the concept are explained with the help of illustrative examples. In questioning-cum-discussion method, the teacher gives specific and relevant examples to explain the concepts. The examples facilitates explanation during the process of discussion. In demonstration method also the teacher illustrated the concepts with

relevant examples. In problem solving method the teacher illustrates the broad learning problem areas related to the contents of a subject, various problem solving competencies, various problem solving techniques, the procedures of framing objectives and the techniques of evaluating the project outcome with relevant examples. The teacher also provides feedback to the learners through example at every step of the project.

The skill of illustrating with examples would equip the student-teachers with various competencies required for effective execution of teaching-learning. It will help the student-teachers to proceed from concrete to abstract. The concrete examples could be given to clarify the abstract concepts in various school subjects like science, mathematics and geography. Thus, the presentation of concrete examples would lead to abstract conceptualisation. The competency in the skill will help the student-teachers to move from known to unknown also. The examples should be arranged in known-unknown sequence in order to illustrate various abstract concepts. The skill would further help the student-teachers to move from simple to complex. Simple examples should be presented in the beginning of the lesson. Gradually, the difficulty value of the examples could be enhanced. The presentation of examples in simple-complex sequence would help the learners to process the informations effectively. The examples should be specific and pinpointed. Since specificity helps effective conceptualisation, the learners would not be able to perceive a thing or a phenomena or an event from vague or generalised examples. The examples should be relevant to the content areas. In order to sustain attention and interest in the learners the verbal examples should be supplemented by multi-dimensional channels of giving examples i.e. maps, charts, models, pictures, sketches, diagrams and living specimens. The teacher could also organise the activity examples. In order to organise teaching learning strategy in the subject areas like socially useful productive work or working with the community, the teacher may encourage the learners to observe and to participate in various productive and working situations. The student's observation and participation in the community working procedure is the technique of providing activity examples to the learners. The teacher should judiciously apply and vary different techniques of giving examples, i.e. verbal examples, examples through audio-visual devices and the activity examples. Again, while selecting the appropriate technique of giving examples, the teacher should consider the cognitive competency of the learners.

Skill of stimulus variation - The skill has the following components :

- a) Movements from one place to another with a definite purpose.
- b) Gestures (movement of head, hands and body to direct attention, express emotion or indicate shapes, movements etc.).
- c) Change in speech pattern.
- d) Verbal, gestural or verbal-gestural focussing (e.g. the teacher says 'look' and points his finger towards something).
- e) Change in interaction style from one to another (e.g. teacher-group, teacher-pupil, pupil-pupil).
- f) Oral-visual switching (change in the medium - from oral to visual, oral to oral-visual, visual to oral-visual and vice-versal).
- g) Pausing (short deliberate intervals of silence while conveying information, explaining etc.).

## Institutional Planning

Dr. D.K. Bhattacharjee,  
Reader,  
Regional College of Edn.,  
Bhbaneswar

**Introduction :** Educational Planning exercise are done at various levels.

- 1) If the planning exercises are done at national level, it is known as macro-level.
- 2) Planning exercises done at state-level/regional level are known as meso-level.
- 3) Planning exercises undertaken at district, sub-division or block level is known as micro-level.
- 4) Planning exercises undertaken at school/institution level is known as Institutional Planning.

No comprehensive programmes of educational development can be undertaken unless systematic planning is done at all the levels. Planning exercises done at all levels are mutually interdependent. Thus the concept of multi-level planning comes.

**Concept -** Institutional planning may be described as a systematic approach to prepare comprehensive plans of educational development at institutional level.

**Process of Institutional Planning -** Institutional Planning involves the following steps :-

- 1) **Setting objectives** - The objectives are derived from aim or purpose of an institution. Primary objectives of an educational institution could be divided into three groups :-
  - a) Teaching-Learning in class room.
  - b) Teaching-learning in out of class room.
  - c) Extension services such as various community related activities like adult education, literacy programmes, youth services etc.
- 2) **Identification of problems and needs** which would depend on (a) analysing of existing situation, (b) Projection of future requirements. For example we may project future enrolment staffing requirements, building requirement, apparatus and equipment requirements.
- 3) **Assessment of Resources.**
- 4) **Determination of priorities** - We may determine literacy improvement as priority or laboratory improvement as a priority.
- 5) **Plan Formulation** : This would involves -
  - i) Setting targets
  - ii) Financial implication
  - iii) Human & other inputs
  - iv) Choice of techniques
  - v) Time schedule
  - vi) Inter-agency co-operation/inter-departmental co-operation.
- 6) **Plan Implementation** - This step involves :



- a) administrative approach
  - b) Resource motivations
  - c) Economy of resources
  - d) Alternative measures for certain agencies
  - e) decision making
  - f) inter staff co-ordination
  - g) Monitoring of cost and time factor
- 7) Monitoring and Evaluation -
- i) Regular staff meeting
  - ii) Meeting with other agencies/departments
  - iii) Discussion problems of implementation and suggestion in quarterly, half-yearly, annual review meetings in Governin Body/Panchayet etc.
- 8) Revision of the Plan & Techniques of Institutional Plannin
- i) Minimisation of cost and maximisation of output.
  - ii) Quality control
  - iii) Effective utilisation of resources both human and non-human inputs
  - iv) Participatory planning with the help of teachers, parents and education departments
  - v) Realistic and practical approaches.

Scope - The scope of institutional planning would cover both quantitative and qualitative aspects of development of an institutio  
The following list of areas is only indicative which would vary from situation to situation.

- 1) Teaching-Learning in the class room.
- 2) Out of the class room activities.
- 3) Facility improvement.
- 4) Building & Equipment.
- 5) General Administration.
- 6) Financial Management.

## Guidance for Mental Health in Schools

Read by S.P. ANAND

Lecturer in Education, Regional College of Education, Bhubaneswar

**P**hysical health accounts for the nature of our physical structure. A physically healthy individual enjoys a trouble-free mechanism of his organism. He records a normal temperature, pulse-rate, heart-beat and a steady blood-pressure. This state of physical health promotes his efficiency at his work. In short, physical fitness for living a happy life stands for a good physical health and vice versa.

Mental health is an index of the mind. It symbolizes mental readiness and willingness with which we identify ourselves with our work or are found to be indifferent towards it. It is the norm of fortitude and firmness with which we act and react with our environment. A relatively consistent mood and a persistent make-up of the mind are the salient indicators of our mental health. Our mental health serves us as the mirror to look at ourselves and perceive the world around us.

Physical health and mental health are the inseparable elements of one and the same composition. Each one is very essential for

the build-up of the other one to result in the personality of our making. Personality is known by our character in action. The character is the blend of values and attitudes in our personality get-up. In a close proximity to these pertinent concepts, the concept of mental health involves one's bent of mind, one's outlook towards life and style with which one conducts oneself in day-to-day life. To describe the concept of mental health, Bernard (1961, p.19) quotes from the proceedings of a White House Conference

Mental health may be defined as the adjustment of individuals to themselves and the world at large with a maximum of effectiveness, satisfaction, cheerfulness and socially considerate behaviour and the ability of facing and accepting the realities of life. The highest degree of mental health might, therefore, be described as that which permits an individual to realize the greatest success which his capabilities will permit, with a maximum of satisfaction to himself and to social order and minimum of friction and tension.

A sound mental health visualizes an idea

way of life for an individual. It registers his best of placement in a socially approved world of his own choice. By virtue of his command over the skill of living a fruitful life, he lives a life of self-satisfaction and social contribution. Inevitable experiences of windfall fortunes and unforeseen misfortunes in worldly affairs, usually fail to destabilise the well-established mentally healthy person. However, in no way, from this it should be construed that he lives a static life. Mental health is acknowledged to be a progressive and dynamic concept. A mentally healthy person feels proud of his strengths and is well contented in his limitations. He is prejudiced towards one who cherishes due respect for the uniqueness of others. An integrated, well-composed, self-reliant and ardently determined person only can justifiably claim, a good mental health.

In this context the concept of mental health may be quoted in the words of Dana I. Worth from his paper entitled, 'Mental Health—Implications for Teachers', contained in Torrance (1965, p.184).

Mental health entails freedom with responsibility, self-reliance and a genuine concern for the common welfare. It is not freedom from anxiety and tension, not freedom from dissatisfaction, not conformity or constant happiness or a lessening of accomplishment and creativity or the absence of personal idiosyncrasies. Furthermore, nor it is in any way opposed to religious values.

Rogers (1957, p. 5) writes the meanings of mental health in these words.

Mental health implies a satisfactory relationship to one's self and to one's environment, as well as the possession of problem-solving techniques for establishing a satisfactory relationship between the two.

The mental health can be defined as the behavioural characteristic of a personality. A sound mental health which may be sought

after by all of us carries a homogeneous structure of desirable attitudes, healthy values, righteous self-concept and a scientific perception of the world as a whole. At the same time, a mentally healthy person should be understood as a dynamic and conscientious individual, who is found to be reasonably rational in the choice of means for the realisation of his pious ends.

### Genesis of Mental Health

Mental health as an index of the mind predominantly touches upon the affective domain of one's personality. In this respect, it has much relevance to his emotional development. Practically, the mental health of an individual manifests itself in the nature of his patterns of adjustment in life in pursuit of an amicable settlement with his environment. That way, adjustment owes much explanation to mental health. It suggests a bi-angular analysis of emotional development and the process of adjustment for the study of genesis of mental health.

### Emotional Development

Emotional development rests upon the inculcation of emotions and their perpetuation in a certain design of organization in one's personality structure. The feelings of love, affection, sympathy, fear, jealousy, joy, anger, kindness, etc., are the popularly known emotions. These emotions go to mould the mode of our momentous thinking and virtually bring shape to the consequent style of our living behaviour. The loving and affectionate attitude we cherish for ourselves and for others essentially emanates from the healthy emotions we come to imbibe in our temperaments. All kinds of prejudices, biases for others and dislikes for our personal lives, are actually the symptoms of a faulty emotional development. It prompts us to examine ones

emotional development in an attempt to have a clear idea of one's mental health.

Emotional maturity and a sound mental health go together. They make a logical co-existence and cannot be imagined in isolation from each other. A sound mental health draws its sustenance from emotional maturity which, in its own turn, is sustained and strengthened by mental health still farther.

Emotional development follows the phenomenon of learning in one's life. It is the nature of feelings relished, experiences met and opportunities availed for their reinforced practice which determines our emotional development. The home, society and school provide us the required environment in which our emotional development takes place. The saying 'love begets love' can further be stretched as, 'jealousy breeds jealousy', 'sympathy, develops sympathy', and so on. That is to say, to foster a healthy emotional development in an individual, emotionally congenial surroundings are required to be made available to him to interact with. A healthy emotional development so facilitated subsequently reflects itself in the emerging mental health of an individual.

### *Adjustment*

The mental health, as understood by the style of life, may find its genesis in the process of adjustment involving an individual and his environment.

The process of adjustment consists in one's consistent quest for the satisfaction of one's personal needs while working within the constraints, expectations and limitations of opportunities imposed upon one by the external demands of one's own social milieu. The personal needs are aroused by one's drives, urges and ambitions. They are also known as an individual's intrinsic needs. The mental health is determined by the adjustive behaviour in terms of how well it meets the

external demands and satisfies the intrinsic needs of an individual.

Intrinsic needs have been discussed in various ways. Murray divides all needs into two groups: Viscerogenic needs (air, water, food, sex, avoidance of injury, etc.) and psychogenic needs (achievement, recognition, autonomy, affiliation). Freud puts these needs under life-instinct and death-instinct. Life-instinct includes several impulses as well as the urge for self-preservation. Death-instinct not only includes self-destructive tendencies but also incorporates aggressive and hostile feelings towards others. Adler comes to note that most of our life activities are devoted in satisfying the desire for status. Carrol has stated that preservation and enhancement of the phenomenal self are achieved through the satisfaction of four fundamental needs: the need for physical security, emotional security, achievement, and need for status. Maslow has propounded a hierarchy of eight needs: (1) physiological, (2) safety, (3) need to belong and be loved, (4) need for importance, respect, self-esteem, independence, (5) information, (6) understanding, (7) beauty, and (8) self-actualization. In Maslow's concept of needs, the satisfaction of all needs is instrumental for the satisfaction of our ultimate need of self-actualization. The need for self-actualization stands satisfied only when an individual comes to the realization that his self has best been utilized. Another writer, Bernard, makes a three-tier classification of personal needs: (1) physiological needs—food, shelter, clothes, rest, relaxation, etc., (2) psychological needs—security, curiosity, achievement and need for independence, and (3) social needs—need to love and be loved, companionship and recognition.

That a sound mind dwells in a sound body illustrates the fundamental role played by the satisfaction of organic needs of an individual in the development of his mental health. Actually, the satisfaction of physical needs

lays the foundation of any worthwhile mental health.

The confidence, determination and will with which we love to live life is basically inspired by our self-concept. The self-acceptance forms the nucleus of any potential self-concept. For an appropriate self-acceptance, the needs of security and worthiness need be adequately satisfied. The need for curiosity is satisfied by our involvement in creative activities. This brings us a lot of happiness. Each and every bit of achievement adds lustre to our life. The opportunities available for working independently towards successful ends, make us genuinely contented and satisfied—all this goes to strengthen our mental health in its right direction. We are loved and our love is wanted by others, we have friends around us and thereby our recognition is guaranteed, all this gives us an alluring outlook towards life. The satisfaction of psychological and social needs helps us a lot in the manifestation of a sound mental health.

It is the satisfaction of various needs which gives us the pleasure of enjoying self-actualization. The attainment of self-actualization is the climax of our reaching an ideal mental health. The satisfaction of our needs does not take place in a piecemeal manner. The satisfaction of one need is interlinked with the satisfaction of other needs. The needs of food, water, house and clothing are not separate from each other. Similarly, the satisfaction of recognition, achievement, curiosity, independence, security, companionship and the need to love and be loved should not be justifiably discussed in isolation from each other as they cannot be satisfied exclusive of each other. The satisfaction of personal needs within the framework of external demands underlies the development of a sound mental health.

We cannot take liberties to satisfy our needs by one and all means. There are social norms, restrictions and disciplines, we are

told to abide by them. The culture of the society, the traditions and conventions of the family, the rules and regulations of our established groups and the laws of the land place the external demands on the permissible means for the satisfaction of our personal needs. External demands are also made on us by the society in lieu of the infrastructure provided by it for the satisfaction of our personal needs.

The satisfaction of personal needs is the crux of the matter in the discussion of the question of mental health. Within the pulls and pushes exercised by the external demands on us, we have to function within our own strengths and weaknesses to assert for seeking an adjustment in life. Confronted with many needs, we have to pick and choose in the light of personal abilities and resources available for their satisfaction in our respective 'life spaces'. Though this exercise does give us a good start yet the road to reach satisfying adjustment poles and attainment of sound mental health still remains to be a little bit thorny one. We are liable to meet stumbling blocks giving rise to failures and frustrations in our daily life. We can also be infected with conflicts and complexes in the process of adjustment. We may have to review our needs and renew our working strategies for their adequate satisfaction. The moments of anxiety and tension become the natural outcomes of delayed fruitful results of our endeavours. We may rescue ourselves from these trying situations by falling prey to adjustment mechanism. Day-dreaming, rationalization, projection, identification and withdrawal are some of the well-known mental mechanisms to which we all resort to knowingly and even unknowingly. These adjustment mechanisms serve to give us a timely relief from the unwanted and painful experiences of our daily life. For the sake of our sound mental health, a judicious place of these mechanisms in our inter-

action with the surroundings is perfectly justified. But a ruthless application of adjustment mechanisms in the satisfaction of our personal needs is an indicator of unhealthy mental health.

In conclusion, we may say that the genesis of mental health may be reasonably examined in emotional maturity and in the process of adjustment. In turn, they themselves are the results of experiences we come across during our interaction with the environment. All the more, both of these explanations are complementary rather than supplementary to each other. The nature of emotional maturity and the patterns of adjustment we profess in our life go to determine the kind of mental health we come to cherish.

### **Mental Health of Children**

In the all-round growth and development of children, their mental health is considered to be a matter of major concern. To make and mould children as good learners, persons of fine traits, worthy citizens and efficient workers of the society, there is an urgent need to be particularly attentive to the nature of mental health which the children should incorporate in their personality make-up.

Truly, it is in the home where the formats of prospective mental health of children are actually preceived. Virtually, the home sets the pace of mental health of budding citizens of society. A loving and affectionate treatment enjoyed by children at home nurtures outstanding features of emotional maturity in their temperaments. The satisfaction of physical needs at home initiates the development of a good mental health. Contented and satisfied parents through their practising styles of life foster desirable modes of life amongst their children. What and how that all happens in the home, the character of the family members, the practices carried on and what is cherished and discarded in conducting

family affairs leave formidable impact on the mental health of the children.

For obvious reasons, children from broken homes are usually susceptible to the symptoms of unhealthy mental health. Parents' indifferent attitude, self-involvement and their sparing hardly any time leave bad impressions on the impressionable minds of their children. Culturally deprived children are usually deprived of the experiences essential for their emotional development. Socially disadvantaged children are denied even the satisfaction of their basic organic needs whereas their psychological and social needs go entirely unheeded to. A bulk of emotionally disturbed children come from such backgrounds. When behaviour of such children comes to hurt others, it is known as problem behaviour. This type of children needs the care of society and school especially to re-build their mental health broken or left unattended to at home.

Society plays a crucial role in the development of mental health of all its members in general and children in particular. The customs, conventions and traditions and norms of behaviour along with fruitful practices of society leave substantial bearings on the minds of children. The welfare schemes launched by society and pursued vigorously for the benefit of its needy children, save them from the hazards of unhealthy mental health. The social security measures undertaken by society, provide the children feelings of security and worthiness. Recognition of each and every child's worth is a pre-condition for inculcating, sustaining and strengthening the mental health of society itself.

Society provides a network of useful informal agencies of education to its children. Radio, television, and cinema and political, religious and cultural institutions and organisations play an important role in the education of children. The leaders of society, in

their own designs, try to prevail upon its members. The children are the first to come under their influence. The combined impact of men, morals, matters and materials of society can hardly be overruled in the shape of things which eventually come to play in the horizon of the mental health of children.

The school is a specialized institution of education that has been established by society exclusively for the benefit of its children. It provides children a good substitute to the family and presents before them a miniature form of society. Instituted as a formal agency of education, very high demands are made on the school. The cultural heritage of society is desired to be preserved, protected and promoted through the school. For all practical purposes, the home expects the school to take care of its children. These expectations can be deemed to be realised to the extent the school functions for the development of a desirable mental health of its children.

In the school programme, the teacher occupies a pivotal position. It is believed that virtually he stands to determine the effectiveness of the process of education. In this realm, the teacher's effectiveness is examined in his contribution to the all-round development of children. In this criterion of judging effectiveness of the school, the teacher's personal mental health is duly taken into consideration. To be an effective ideal for his students, the teacher must be the custodian of a sound mental health. And for this, the teacher needs be a man of emotional maturity, a man of calibre and high moral character who should feel really contented with his lot in this satisfaction of his needs while working in the teaching profession. In the phenomenon of interaction in education, it is only a professionally competent and skilled, mentally healthy teacher who is in a position to contribute his bit to the development of a sound mental health of his students.

A school staffed with mentally healthy

teachers can reasonably be taken to be well set to work for the development of sound mental health of its children. The popular dictum 'well begun is half done' fits quite well here. What more is needed in this direction is that all children, irrespective of their individual differences, must be given warm feelings of their being welcomed, wanted and accepted in the school. The courses of studies, including co-curricular activities, should respond to the interests and aptitudes of children. All children should find ample opportunities to explore themselves and cherish the best of placement in the school. The children should relish recognition within themselves, from the teachers and the school community alike. The school's interest in the personal problems of students with respect to their studies, games, hobbies and the problems concerning to their homes, goes to make them identify with the school. The children may experience unpleasant moment in their efforts but only to serve them to multiply their efforts for the achievement of unachieved goals. Failures should not be allowed to dishearten them but made to act as stimulants for learning the patterns of adjustment. The teacher's reliance on students as responsible individuals and allowing them a sufficient chance to act and interact independently goes a long way in strengthening their self-concept underlying a sound mental health.

In teaching-learning strategies, the school's due concern for emotional and social development invites our attention in context of the resulting mental health of children. We have to work for the development of healthy values and better insights in their thoughts and actions. This cannot be and should not be left to a chance. Children need guidance for both the ends and the means they should aspire and work for. It is heartening to note that lately we have adopted a realistic approach to sex education. It calls upon us to change our minds towards imparting moral education to

children. It should be made an essential feature of school programme. The status of health education in schools should be rationally upgraded. The development of strong character for a sound mental health cannot be imagined without developing spiritual values in the patterns of behaviour of children. And for all this, a psychological approach on the curriculum should replace the prevailing conventional practices in schools.

Briefly, it may be said that children are the joint responsibility of home, society and the school. They should be well aware of their respective individual obligations and a combined role expected to be played by them for the all-round development of children. It is very pertinent to arrive at and gear up well-defined coordinated efforts of home, society and the school to discharge their one-rous duty of giving a specific direction to the development of mental health of their children.

### Conclusion

We have come to live in a difficult complex world. There is a question of making appropriate choices, plans and adjustments at each and every step of life. We all stand in need of guidance to make a successful struggle for

existence. *Education for life* or *education is the preparation for life* becomes meaningful only when education in schools means education for development of sound mental health of children.

Education for character and development of an integrated personality entails guidance for mental health in schools. Guidance as an individualized aspect of education facilitates each and every child to develop a righteous self-concept and a scientific perception of his surroundings. That children should develop healthy attitudes and desirable values, acquire problem solving techniques and become self-directive and self-reliant, has been visualized as the tasks of guidance movement in schools. Guidance workers enlisting the cooperation of teachers and parents while working in the prevailing social set-up, endeavour to help children develop mental health which should fetch them individual satisfaction and enable them to live a socially useful life.

In these critical times of crisis of character, growing indiscipline and restlessness within the minds of the youth, guidance for mental health is an urgent need to give any meaning and purpose to the process of education in schools.

### References

1. Anand, S P. In the Quest of Guidance in Education, *Education Quarterly*, XXXIII (III), 8-11, July 1981
2. Bernard, Harold W., *Mental Hygiene for Classroom Teachers*, McGraw-Hill Book Company, Inc., 1961
3. Bhan, Suraj and N.K. Dutt. *Mental Health through Education* New Delhi : Vision Book, 1978
4. Frank, Riessman and others (Eds.). *Mental Health of the Poor*. London : The Free Press of Glencoe, Collier-Macmillan Limited, 1964
5. Kaplan, Louis. *Mental Health and Human Relation in Education*. Harper and Row Publishers, 1959
6. Rogers, Dorothy. *Mental Hygiene in Elementary Education*. New York : Houghton Mifflin Company, 1957
7. Terrance, E. Paul and Robert D. Strom. *Mental Health and Achievement*. John Wiley and Sons Inc, 1965



## Action Research

### 1. Research

Traditionally, research has been acknowledged as an area of intellectual exercise in the pursuit of establishing fundamental truths of life. It is considered to be the domain that is exclusively meant and that has been reserved for intellectuals only. Research, as such, has been virtually viewed as the seat of wisdom.

Research is a thoughtfully spelt out, systematically designed and very intelligently conducted creative activity.

In modern times, research has become a part and parcel of each and every human engagement. <sup>A</sup> Research and Development (R&D) unit constitutes an important wing of each and every well established institution, organization and establishment, ~~that is~~ ~~anyway worthy to be reckoned with.~~ There prevails a ~~serious~~ <sup>almost</sup> research culture in all departments of present day life.

Research leads to innovations. Research results in new theories and <sup>discoveries</sup> ~~innovations~~. Efficiency is enhanced and quality of production is improved upon by research programmes. Civilisation of the day in all its facets is accredited to research of one kind or ~~of another kind.~~

Research is an insightful learning. It is a passion for learned people. A <sup>a</sup> creative mind finds its real life in ~~his~~ <sup>its</sup> research programme. In the quest of achieving an excellence in human life, research is a momentous movement of research oriented people.

Research is like a mission of missionary like people to render a humane service to humanity in the ~~best~~ ~~of its~~ missionary like spirits.

## 2. Research in Education

Education has come to function as a specific process-programme enunciated by the society that is specifically meant for facilitating the healthy allround growth and development of children. In this man-making, character-building process, there are many pertinent questions which have been very scientifically answered by the research workers engaged in educational research. It is on the basis of educational research findings that a number of vital theories of learning have been developed, methods of teaching have been arrived at and adequate <sup>guidelines</sup> ~~guide lines~~ for curriculum <sup>construction</sup> have been chalked out for the children of different age groups. The entire system of pedagogy has been greatly benefitted and enriched by the valuable contribution made to it by research in guidance/education.

Educational research has established education as a scientific process. This has fetched Research in Education, a place of fundamental importance in the entire spectrum of research activity in the society. Research in the field of education is being recognised as equally challenging and fascinating to the educational researchers as it is found by researchers engaged in any other discipline of knowledge.

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Till recently, researchers in education were not really the field workers in the process of education. Research in Education has been the domain of research workers who themselves were not found actively involved in the process of education. However, these research workers have produced and supplied a good amount of constructive research results to the consumers who are actually running the process of education. These out of the field research workers in education have laid emphasis upon what the teachers should teach and what not to teach, how to teach and how not to teach, who should teach and who should not teach. The kind of research pursued by these research workers is known as pure-research, fundamental research, normative research and historical research. The significance of the contribution made to the process of education by these researchers can hardly be underestimated by any one. Actually they constitute the team of builders who have built up the modern system of education, as such.

### 3. Action Research

'Action research' is focussed on the immediate application, not on the development of theory, nor upon general application. It has placed its emphasis on a problem here and now in a local setting. Its findings are to be evaluated in terms of local applicability, not in terms of universal validity. Its purpose is to improve school practices and, at the same time, to improve those who try to improve the practices: to combine the research function with teacher growth in such qualities as objectivity, skill in research processes, ability to work harmoniously with others and professional spirit.'

- John W. Best ; Research in Education.  
Frontice Hall of India, 1982, p.22.

Action Research is more or less a recently introduced movement in Education. In this type of research, teachers teaching and educational administrators in schools and colleges are found to be actively engaged in research in education. Action research is the research in which <sup>the</sup> practising personnel in the process of education arrive <sup>at</sup> a systematic designs of research problems to be researched into at their own levels that they themselves happen to face in their routine duties.

Educational personnel (teachers, counsellors, resource persons, social workers, headmasters, educational administrators) who are passionately committed to the cause of education, emerge ~~up~~ as action researchers in the process of education.

#### 4. Action Research and Teachers

Action research is <sup>a kind of</sup> ~~the potential~~ research in education, <sup>for which</sup> ~~in the sense that predominantly~~ the need ~~of it~~ is felt by persons in action in the process of education. ~~It is~~ for this reason it is known as Action Research. These researchers are mostly teacher-researchers who conduct the research and test the validity of its results in the real teaching-learning situations. These action researchers are supposed to have real perspectives of their research problems at hand. It helps them formulate their insightful hypothesis of the problem, too.

Getting into Action Research, on the part of teachers manifests their genuine concern for the day-to-day problems that they themselves face in their teaching profession. They research with an urge to understand the problem, find

its solution and improve upon their teaching efficiency. It adds to their competency and effectiveness in teaching profession. The feelings of accomplishment which they happen to nurture on the successful completion of their action research projects, makes teachers still <sup>the</sup> more creative and venturesome in the performance of their duties. While substantiating the effectiveness of the process of education as a whole, action-research poised teachers make a noteworthy headway in their personal as well as in their professional growth and development.

Teachers involved in action research are deemed to be conscientious teachers, dutiful teachers who have an ardent desire to do their best in the teaching profession. Teachers who cherish no inklings for analysing their day-to-day problems in teaching may be taken as devoid of <sup>a</sup> ~~their~~ true love for their teaching profession. They are just teachers by dint of their own pressing compulsions who have yet to develop the required commitment to their profession. Teachers who feel proud of teaching profession as their ~~own~~ beloved career enjoy undertaking action research projects as <sup>a</sup> ~~the~~ matter of their pet pastimes.

Involvement in Action Research should be taken as essentially the teachers' own prerogative. It should not be imposed upon them. Action research should be taken by teachers as a matter of their <sup>own</sup> ~~own~~ sweet will. What is urgently warranted <sup>a</sup> in this direction is that the teachers should be duly motivated for undertaking action research programmes as a part and parcel of their routine professional obligations.

## 5. Motivation of Teachers for Action Research

For all practical purposes, teachers in their own interest and in the interest of teaching profession as such should have a facilitation for action research. Research in Education when it is supplemented with Action Research, undertaken by the school, it becomes really a research of practical utility and a research for ensuring an era of reformation in Education. Research in Education that is not supported by Action Research remains to be research for research sake without having <sup>sufficient</sup> bearings on the teaching-learning strategies being followed in the process of education. Research in education becomes meaningful and it reveals upon the prevailing thoughts and practices of the system of education when it is essentially conducted by in-service classroom teachers and educational administrators of schools.

Teachers need be facilitated and motivated to examine their day-to-day pertinent questions with an analytical bent of mind. They should be encouraged to develop an urge to make well designed investigations into the ticklish problems that they happen to face in their daily teaching process. Teachers are really active in their duties when they are <sup>actively</sup> involved in Action Research.

We should have pre-service courses of studies on Action Research at the very threshold of teachers' joining the teaching profession. While in service, teachers should have refresher courses on Action Research. While in service, they should not be over-loaded with routine classroom teaching and with other school duties but they should loose sight of

some programme of action research expected from them.

Action research seminars in schools <sup>to be</sup> can be found <sup>to be</sup> very useful for motivating the teachers to take up action research problems for investigations at their levels. Some kind of consultancy service can also be instituted in the schools for the purpose. Headmaster/principal is also expected to give good guidance to teachers to carry on action research in schools. Actually, heads of educational institutions should instil an inspiration amongst teachers for pursuing action research most willingly. The headmaster should also formulate team-action research designs in which a team of teachers should be actively involved. The headmaster as a leader, should never be found failing in providing his leadership to action researchers in his school.

If we are really interested in action research, its financial aspect should not be overlooked or set aside so very casually. Teachers involved in action research or ready to enter into it, may need financial assistance to support their research projects. Although a close scrutiny may be very much desirable before sanctioning financial assistance to the teachers for their action research projects but <sup>it</sup> ~~this~~ ~~all~~ should be done with an open heart without any malice or prejudice towards the concerned teachers. At the same time, a true action researcher should never mind and have the pleasure of financing his research from his own pocket, too. He should not take it as taxing to his purse. He should take it as the most desirable investment for his personal growth and satisfaction. A true researcher should not depend upon the mercy of people who matter in the process

of sanctioning financial grants to their proposed research projects. A research should be taken as a mission towards which a sacrifice of some money must be taken as a matter of privilege. NCERT, UGC, and CSIR have elaborate programmes and schemes to finance research projects. <sup>Similar</sup> Such ~~like~~ schemes should also be incorporated in the schemes of DIETs.

NCERT runs a Seminar Readings Programme for action research projects. Selected projects are awarded a merit certificate of National Award with a prize money of Rs.1000/- each. <sup>Similar</sup> Such ~~like~~ schemes of reinforcement and recognition ~~is~~ need be launched at State and District levels, too. Action researchers should get incentives in the form of additional increments and out-of-turn promotions in their professional careers. All the more, <sup>the</sup> State should give a wide publicity to the best adjudged action research projects as they may really deserve.

## 6. Problems for Action Research

There can be a long list of problems which can be considered for Action Research. Teachers themselves are the right persons to select their own problems which might be haunting them in their work. However, for illustration sake, some of the problems can be enlisted as :

Students may be studied for their :

- Study habits,
- Motivation for studies,
- Attitude towards studies,
- Likings for each other,
- Likings for teachers,



- Family backgrounds,
- Attitude towards homework,
- Adjustment at home,
- Adjustment in the school,
- Mental Health,
- IQ and Creativity,
- Perception of teachers' quality of teaching,
- Perception of environmental factors affecting their growth and development,
- Perception of School Organizational Climate,
- Special needs.

A student who is found to be an exceptional one (gifted, slow learner, delinquent, quarrelsome, handicapped) may be studied with the help of Case Study Method.

Experimental designs like the following ones can also be thought of under Action Research programmes :

- Impact of personality of teachers on the learning of students in terms of their academic achievement.
- Teachers' preparedness for teaching and students' learning thereof.
- A comparison of the effectiveness of methods of teaching.

In collaboration with counsellors in schools, teachers can enter into small but very useful action research studies with the tools and techniques of interview, observation, check lists and rating scales. Once a researcher, also the action researcher enters into research activity, he visualises his own plan of action.

## 7. Steps in Action Research

An Action Research project may be illustrated for the various steps as under :

### 7.1 Statement of the Problem

The teacher visualises the problem. To begin with, he has to define the problem in its very concrete form. For this he has to give a deep thought to it. For further clarification he may discuss the problem with his colleagues. He should make a little bit of survey of literature especially related to the problem at his hand. This helps him to get at the real feelings of the problem. In this statement of the problem, the teacher is expected to have the clarity of the perspectives and limitations of the research problem.

For an example, the teacher may observe that students are not-being found <sup>not</sup> duly inclined towards their studies. Students' poor performance in examinations may lend ~~an~~ credence to teacher's contention. There can be many reasons for students' failure to make satisfactory achievement in studies. Now, in this context, one relevant aspect may be to study students' attitude towards studies. Here, it may be noted that students' attitude towards studies may be influenced by many factors. But for the action researcher, here he is only concerned with the factual study of students' attitude towards studies. He is not concerned with the factors building up or not allowing to build up healthy attitude of students towards their studies. So, he comes to make the statement of

of his Action Research problem as :

~~A>STUDY OF STUDENTS' ATTITUDE TOWARDS THEIR STUDIES.~~ ✓

*Does a student's attitude towards his studies affect his achievement*

## 7.2 Hypothesis

A hypothesis is the visualised answer to the research problem under investigations. It illustrates purely a tentative answer to the problem in the background of which the researcher may get into his research activity. A hypothesis is examined for its acceptance or rejection on the basis of the findings/ results of the research study.

In the above cited research problem, the teacher has undertaken this study with the notion that students fail to make academic achievement up to his expectations because of their lack of healthy attitude towards their studies. That means that the teacher thinks that students do not cherish a good amount of positive attitude towards their studies. For this, the hypothesis for this problem may be formulated as, 'Students lack a desirable level of positive attitude towards their studies.'

It may be pointed out that it is not very essential that each and every action research problem must be backed by its hypothesis. Rather than starting with a tentative answer to the question of the research problem, the researcher can straightway start with his investigations to find out the answer to the problem.

## 7.3 Sample

For the study of any research problem, it is not feasible and it is also not required to include the total population of students. Statistical techniques help us to study the problem over a small population known as sample of the study. For the sake of our present problem<sup>1</sup>, we may say <sup>that</sup> the sample of the study shall be constituted by the students of Class V, ~~Neighbouring schools.~~

#### 7.4 Tools and Techniques

Tools and techniques are the wheels of a research programme. The researcher to begin with his work begins with his research into the tools and techniques for the study of his problem. He should be conversant with the tools and techniques available to serve his purpose. He has to make a very wise choice of tools and techniques for his investigations.

At elementary school level<sup>1</sup>, we may conduct our action research with the help of interview of students and their parents. An interview schedule may be developed with mutual discussions amongst staff members. Students' attitude towards their studies may be studied by asking elementary questions on their likings for studies, perception of the utility of studies for them, likings for the school, attitude towards books, homework and teachers. \*RCEB Scale for Students' Attitude towards their Studies, may be taken as a reference point in this context.

\* S.P. Anand ; Tools for Secondary Class Students.

Shree Publishers, Bhubaneswar, 1990.

A <sup>are</sup> reliable and ~~a~~ valid data <sup>is</sup> a must for arriving at reliable and valid findings and for that reliable and valid tools and techniques are but very essential. The researcher to begin with should start his work <sup>by equipping</sup> ~~with well equipped~~ himself with the required tool and technique to work with. He should not coin out a problem befitting to the tool available to him rather he should prefer an action research on his own felt problem itself for which he may even venture to develop his own tools and techniques.

### 7.5 Data Collection

Once an appropriate tool has been selected, developed or adopted; further need lies in being fully familiar with the techniques of its application. In a pilot study, a try out of it over a small sample of students can also be exercised. The researcher has to be very accurate in his data collection. However, in data collection, we may not expect a beginner to be the master of it but it is definitely desired that <sup>he</sup> ~~we~~ must acquire mastery in this important <sup>aspect</sup> ~~department~~ of research in due course of time.

### 7.6 Analysis and Interpretation:

Analysis and interpretation of the data collected determines the merit of an action research project. How to analyse the data, ~~it all~~ depends upon the research problem and the data collected.

It is believed that we should not shirk using statistics to analyse the data but we should also not be

over enthusiastic to apply statistics for merely giving the data a statistical treatment. We should be rational in our approach. It is well advised that the researcher may read some research reports to be conversant with the right method of making meaningful interpretations of his data. The analysis of the data must lead to accept<sup>or</sup> or <sup>reject</sup> the hypothesis, if any, with which the researcher began his research work.

### 7.7 Practical Implications

Collecting of research findings in a systematic manner is <sup>not</sup> sufficient. But the researcher should also draw practical implications of the research results of his study. A record of practical implications makes the research study useful to one and all who are really interested in the improvement of teaching learning practices in a system of education.

### 8. Suggestive Studies

It is advisable on the part of the researcher to pin-point some follow-up studies to his research study. It will help him to pick up the thread later on as and when he himself likes to extend his completed research study. Suggestive studies motivate the fellow researcher to do more research work on the research problems like the ones undertaken by the researcher concerned.

As for example, here we may suggest studies like the following ones :

1. Students' attitude towards studies and their family backgrounds.

2. Students' attitude towards their studies and their achievement in examinations.
3. School organizational climate and students' attitude towards their studies.
4. A correlational study of students' study habits and their attitude towards studies.
5. A study of students' motivation for and their attitude towards studies.
6. Students' mental health and their attitude towards studies.
7. Students' attendance in the school and their attitude towards studies.
8. Students' inter-personal relationships and their attitude towards studies.
9. Factors affecting students' attitude towards their studies.
10. A comparative study of sportsman ~~men~~ and non-sportsman for their attitude towards studies.
11. A comparative study of attitude of boys and girls towards their studies.

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*By*

## TEACHING PROCESS AND ITS EFFECTIVENESS

Dr.S.P.Anand  
Reader in Education

## 1. Teaching Process

In the process of education, teaching process occupies a pivotal position. The process of education is set in motion and it is kept in its momentum by this teaching process itself. It may be said that teaching process provides a soul-fibre to the entire process of education.

In its popular perception, teaching process involves the process of imparting instructions to the learners in the prescribed courses of studies in the very formal set of situations. Educational institutions, organizations and establishments are the especially established <sup>recognised</sup> set-ups where the congenial climate for conducting the teaching process is specifically provided. In this fashion, teaching process is carried on in a class or with a group of people at a time. However, individuals at their personal levels have also been witnessed to engage tutors to receive the required instructions, individually. It looks as if teaching process is an information dissemination and receiving process undertaken on contract basis that may involve a nominal fee or an exuberant monetary transaction. It gives us an impression of teaching being a business like process in which students are told that what is written in their books, how they should memorise it and eventually reproduce it in their examinations.

However, in the process of education, to look at its



right place, teaching process coupled with learning process constitutes the complete process of education. Teaching and learning are the two essentials wheels of the process of education. It is presumed that a desirable and a desirably <sup>durable</sup> ~~desirable~~ learning is only caused by a well designed process of teaching and the existence of a worthwhile teaching process is spontaneously ruled out when it does not result in a meaningful type of learning. In the process of education, teaching and learning processes are identically twin processes which have no separate existence, whatsoever.

Teaching process may be viewed as the causative factor in the process of learning and vice-versa. Teaching process involves an in-put (investment) potential in the process of education which accounts for the out-put (product) in the form of learning. This yield of learning out of the process of education serves as a feed-back to accelerate the process of teaching still further. This cycle of cause and effect relationship between teaching and learning may be construed as the real mechanism of the dynamics of the process of education as such.

## 2. Effectiveness

The effectiveness of a process is an index of its success. It is the yard stick of its utility and purposefulness. And for that, the effectiveness of the process depends upon the efficiency and competency with which it runs.

The amount of learning in terms of its both the quality and quantity that is generated in the teaching process, measures the effectiveness of the process of education in general and of its teaching process in particular.

In teaching process, persons<sup>e</sup> held responsible for its conduct are known as instructors, coaches and teachers. In schools, we usually call them teachers, in engineering institutions they are known as instructors and in colleges and universities, these teaching persons<sup>e</sup> are designated as lecturers, readers and professors. Fundamentally these all are teachers as they are primarily posted for conducting teaching process at their respective places of placements. The efficiency i.e. effectiveness of teaching process obviously rests with the teachers who teach ( make an in-put, investment) to affect ( an out-put, production) learning in the process of education.

Teaching is the organization of learning. In this process, as a testimony of its effectiveness, teaching is so designed by teachers that the learners really should be able to learn as stipulated in the teaching process. And, learning is said to have taken place as and when :

a. It augments the phenomenon of assimilation and adaptation to the new set of information in the intellectual horizon of learners. The learners receive, understand and comprehend and additional information or <sup>a fund of</sup> knowledge which enriched their existing stock of information which is already available with them.

b. The learner under the influence of teaching process refines his habits, attitudes, values, sentiments, temperaments, perceptions and behaviour as a whole.

c. The learner is able to do something <sup>still</sup> ~~in~~ better form or becomes capable of doing something new in the post-teaching stage.

An effective teacher must be successful in affecting aforesaid three outcomes in the teaching process to establish its effectiveness. Keeping these three indicators of effectiveness of teaching process, we may examine as to what is required in its architects (teachers) to redeem these objectives of an effective teaching process.

### 3. Determinants of Effectiveness

Teacher effectiveness determines the effectiveness of teaching ~~and~~ process. In this context, teacher effectiveness may be analysed from his :

- 3.1 Qualifications
- 3.2 Rapport with students
- 3.3 Personality
- 3.4 Job-satisfaction

#### 3.1 Qualifications

A teacher is primarily an instructor who imparts instructions on a particular subject or discipline of knowledge. And for that he is expected to be a man of knowledge and wisdom. He should be a well-informed person in his field of teaching. He is involved in an intellectual exercise of teaching. For his own

success and for the effectiveness of teaching process in which he is involved in, the teacher is expected to be an above average intelligent person.

Only a learned person can be relied upon to provide his competent leadership in the process of learning for his learners. Teachers in teaching process should reasonably be highly qualified in themselves who are expected to help their students achieve laudable academic qualifications. They should be brilliant scholars in their respective subjects of teaching. They should keep themselves abreast of the latest developments taking place in their areas of specialization. As a whole, they should be Jack of all trades (disciplines of knowledge) but essentially they must be masters of atleast one of the teaching subjects of their own choice.

Along with general and specific academic qualification, for being in the profession of teaching, teachers as a real professional workers should also be duly professionally trained for the purpose. General and academic qualifications <sup>equip</sup> them with essential stock of material to work with, professional qualifications & 'teach' them as to how to teach and conduct themselves effectively in the teaching process.

Academically and professionally qualified teachers qualify themselves to seek or claim an entry into the teaching process. They are considered to be prospective effective teachers in the teaching profession. Inviting and retaining such like competent teaching person<sup>e</sup>ls in the teaching

process gives a good start towards the making of an effective process of education of our times.

### 3.2 Personal equation with students

Teaching process essentially involves man-to-man interaction - an interaction between teachers and taughts is the modus operandi of the process of teaching. It is also said to be the process of human interaction. In this teacher-taught interaction, teacher as a senior partner by virtue of his age, qualifications, experiences and placement in the educational institution. He is expected to take a lead to establish a hot line within himself and his students. They should have a perfect mutual confidence and trust in each other. A fibre of cordiality and a warm human touch should establish a formidable link between teachers and taughts. They should feel like meeting each other, listening to each other and speaking to one another. Teachers and taughts should bind themselves in spiritual bonds. This will make the task of teaching on the part of teachers, really an effective one which will produce the desirable results to be evaluated in the learning of students.

Personal relationships between teachers and taughts, stimulate the teachers to teach at their best and inspire the students to benefit themselves to the maximum possible level. It is only in the background of personal human relationship, an effective teaching process can be visualised.

Teachers are essentially intellectual persons but for

the effectiveness of teaching process, they are also needed to be primarily humane by nature. They should, atleast, succeed in earning the love and affection, respect and adoration from their students to enable themselves teach effectively. And for that they should be unbiased in temperaments, free from any kind of prejudice towards students and treat them as most lovable individuals without making any sort of discrimination among the students, *whatsoever*

### 3.3 Personality

Teacher's qualifications and his style of establishing rapport with his students do account for some important elements of his composite personality. But still, Personality stands for something more than this. A silent impact, an unseen penetrating influence and <sup>deep rooted life-long</sup> a far-reaching bearing that a teacher leaves on his students, it is attributed to the charisma of his personality.

A teacher to be firm in his effectiveness, must be a man of character which should be taken for granted as above board. He should have a clean slate of personal record of his personal as well as of official/professional life. He must be accepted as a man of integrity and honesty. In his manners, he should be attractive and sociable in nature. He should be known for his sincerity of purpose and high ideals that should govern his day-to-day life. He should be accepted as a hero-ideal by his students. His attitudes, values, sentiments, temperaments and perceptions should be worthy of emulation by his students.

A teacher should be able to project his personality who should be listened to attentively by his students, they should find in him a true friend, guide and philosopher. Students should love adhering to the path shown by the teachers. Teacher's words should be Gospel ~~for~~ for his students. Teacher should teach character from his own character. Students should learn attitudes and values from the attitudes and values being practised by teachers in their daily life. He himself should set an example rather than making lectures on character and personality to no useful purpose. In teaching process, teacher himself should be a wide-open book for students to follow and arrive at their own most enviable philosophy of life.

Whatever may be the qualifications of a teacher, in the absence of a towering personality of his own he can never be thought of capable for teaching for the desirable personality development of his learners.

### 3.4 Job-satisfaction

A teacher having the required educational-professional qualifications, an ideal personality and even while commanding a knack for establishing healthy relationships with his students, may still fail to function effectively when he betrays a lack of job satisfaction in his teaching profession. A teacher to do his best at teaching must primarily be wedded to teaching, enjoy the teaching and be proud of his placement in the teaching profession. It is only in this state of mind that a teacher teaches <sup>well</sup> ~~duly~~ motivated with gusto. This is reflected in his taking the classes very punctually with due pre-preparation and not at all feeling proud of his ~~propping~~ <sup>propping</sup> the classes very casually

and so very often. Teachers to relish job-satisfaction is a pre-requisite for making teaching process as an effective teaching process.

Professional incentives in the form of an adequate salary packet, sufficient promotional opportunities, congenial working conditions and a democratic set up in educational administration are counted as factors which really matter in fueling a love for the teaching profession in the minds of teachers. They enjoy a respectful status in the society by virtue of their being teachers, boosts up their morale for teaching most effectively. These illustrated factors found wanting in teaching profession do adversely affect the mental health of teachers and thereby their effectiveness gets a severe set back that may result in falling upon the effectiveness of the teaching process at as such.

In teachers, these four factors have to exist in unison to enable them to teach effectively and to render the teaching process as an effective teaching process.

#### 4. Effectiveness of the process of Education

An effective personality of the teacher in all its facets determines his effectiveness. A consolidated and the combined effectiveness of all teachers determines the effectiveness of teaching process. This describes the functioning of a formal teaching process carried on in formal set of situations.

A network of the process of education includes a formal teaching process as discussed above and the wide-open informal



educational process prevailing in the society.

Society is a great teacher for the learners. This includes the family pattern of students. Family and society supplement the efforts of teachers in the formal set of teaching process. Also, the undesirable impact of these institutions on the allround development of learners acts as a subtle impediment in the calculation of effectiveness of teaching process going on in formal educational institutions. Rather it may be said that society in its culture of social, religious, economic and political practices-activities must have a formidable healthy influence on the learning of learners.

Educational institutions cannot shift the responsibility on Society for their poor results of their teaching process or for the running of an ineffective teaching process. Educational institutions have to be effective in the given situations prevailing in the society. These should also be effective in counteracting the evil effects of society on the personality development of learners. The process of education has to preserve, protect and promote the healthy cultural traditions of our system. Teaching strategies involved in teaching process will be doubly effective in the formal system of education if the system as such in the society cooperates with the educational institutions. Leaders of all walks of life i.e. religious pandits of all religions, social workers, men at the helm of affairs of our economic activities and political leaders of our times have to keep in mind that they are also 'teachers' for the learners in their most informal but subtle ways. This is the combined effectiveness of both formal and

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theoretical teaching processes which account for the effectiveness of the process of education as a whole.

### 2. Assessment of Effectiveness

Learning made possible on the part of learners by the process of teaching in Education measures the effectiveness of teaching process as well as the effectiveness of the process of education as a whole. Assessment of the effectiveness of teaching process is virtually the assessment of the process of education itself. It is a very ticklish task to arrive at the right type of evaluation of the effectiveness of teaching process. However, it has been attempted in two ways : Micro measurement and Macro measurement.

In macro measurement of the effectiveness of teaching process, we may mention three of its types which are popularly known as :

- I. Pre-sage effectiveness
- II. Process effectiveness
- III. Product effectiveness

#### 5.1 Pre-sage effectiveness

It is believed that the quality of teachers evaluates the quality of education and its effectiveness. The quality of teachers evaluated for their qualifications and personality gives us a reliable measure of their probable effectiveness in the teaching process. Personally competent and men of character ensure the effectiveness of teaching process.

dedication and commitment of teachers for the teaching profession, evaluates their potential effectiveness in teaching process. Professionally satisfied teachers maintaining a high morale while upholding the high standards of behaviour gives us a reliable and valid evaluation of their effectiveness in the process of education. This measurement is known as the process-effectiveness of the teaching process.

### 3.1 Process-effectiveness

In process-effectiveness of teaching process, teachers are observed in their action. Supervisors may rate them for their teaching. Students themselves may also provide a trustworthy information about the quality of teachers' teaching in the classroom. The combined ratings of supervisors and students provides a fair amount of accuracy in the evaluation of the effectiveness of teaching process. In this method, methods of teaching being adopted by teachers, their success in motivating the students to be attentive and responsive to their teaching, teachers' application of teaching skills skillfully in their teaching and their command over the contents of teaching are the main points of looking at the effectiveness of teaching process.

In pre-sage evaluation of the effectiveness of teaching process, it is inferred from their personality as such but in process-evaluation, the effectiveness of teaching process is evaluated at the spot when the teachers are in action in their teaching. It adds to the reliability and validity of the measurement of effectiveness of teaching process. Teachers' classroom behaviour, teaching-learning climate generated in

the classroom, evaluates the process-effectiveness of teaching process.

### 5.3 Product effectiveness

The objective of teaching process evaluates its product effectiveness. The results of the teaching process in the form of learning as the outcome of teaching process are evaluated on different levels, performance tests and personality tests administered on students. The difference between the pre-teaching and post-teaching scores made by learners measures the product effectiveness of teaching process.

In macro-effectiveness of teaching process, for all practical purposes, we combine the assessment of pre-sage, process and product type of effectiveness and arrive at a net measure of the effectiveness of teaching process.

It may not be very exactly possible to assess the effectiveness of teaching process in its absolute discrete terms. However, teacher's personality, their mastery over their respective disciplines of knowledge, their styles of interaction with students, their professional competency to teach are some of the good indicators of the effectiveness of teaching process. Students being benefitted in the process of teaching in terms of their cognitive as well as affective development of their unique personalities give us a dependable index of the effectiveness of teaching process as well as of the effectiveness of the process of education itself.

## IN SUMMARY

Teaching process is essentially an educational process. It is a means towards the achievement of the ends of the process of education as such. Its effectiveness determines the effectiveness of the system of education as a whole.

Teaching process is fundamentally the operation-action territory of teachers. Teachers' effectiveness is an index of the effectiveness of teaching process and thereby of the effectiveness of the process of education in itself. Teachers' effectiveness is determined by their academic-professional qualifications, their conduct with students, their quality of personality profiles and how do the teachers cherish the teaching profession as rewarding and challenging one.

Teachers are the architects of the effectiveness of the process of education. In their teaching, they must affect learning on the part of learners which should be reflected in the quality of their allround development. Individually satisfying and socially useful individuals coming out of the educational-vocational institutions manifest the effectiveness of teaching process in our system of education.

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10/10/72

## Learning of Educational Objectives

Dr. P. Das,  
Regional College of Edn.  
Bhubaneswar

A number of models of classification of objectives has been developed. The most convincing of these in recent years has been the taxonomical model of educational objectives developed by Benjamin Bloom and his research associates in 1956. The classification scheme included three "domains", the cognitive domain, the affective domain, and the psychomotor domain. The cognitive domain deals with the objectives relating to recall or recognition of knowledge and development of intellectual objectives and skills. The affective domain includes such things as interests attitudes, reactions, values, appreciation and good judgment and the psychomotor domain concerns itself with the physiological skills. This particular paper attempts to discuss educational objectives of cognitive domain.

The first publication to come out of the group working with Bloom was entitled "Taxonomy of Educational Objectives - Hand Book-I: Cognitive Domain". It is in this publication that the cognitive domain that the cognitive domain is described and levels within it explored in detail.

The cognitive domain is divided into six major levels. They are knowledge, comprehension, application, analysis, synthesis, and evaluation. Let us discuss each in detail.

**Knowledge :** The first and lowest level of cognitive domain is knowledge. At this level the student is expected merely to recall information he or she has been exposed to or to recognise information presented. The main skill emphasised by objectives written at this level is simple remembering.

- Example - 1) Draw the map of India & write the name of three states, West Bengal, Orissa, Bihar.  
2) Given a list of 10 people. Underline all the names of famous mathematicians.

**Comprehension :** The second level of the cognitive domain is comprehension or understanding. It is the view of many educators that it is this level that is most emphasised in today's schools. Bloom includes 3 kinds of intellectual skills in the comprehension level. The first of these is translation, the ability to make a one-to-one conversion from one form or language to another. The second skill is interpretation, which is the ability to generalise or paraphrase information, and the third skill is extrapolation, which is the ability to go a little beyond the information given and make predictions based on the informations presented.

- Example : 1) Given a mathematical formula, restate it orally in sentence form so that the restatement is mathematically correct.  
2) Compare the educational philosophy of Gandhi with Tagore and interpret.  
3) Given a graph showing the the B.A. examination result of last five years. What's the result of subsequent year if the trend continues in the graph were to continue.

.....1/2

... : ... level of cognitive domain is ... the act of applying some observed ... without promoting. Bloom describes ... levels of comprehension and application. ... of comprehension shows that the student ... its use is specified. A demonstration of ... it correctly, given an appropriate ... of solution is specified. It is useful to ... a principle or rule at the comprehension level, ... the principle or rule in a practical ... level.

... : ... the dimension of a room and the cost of paint, ... write down how much paint will be ... it will cost ?

... : ... level students should be able to break ... elements or internal organisational principles ... relationship among these elements or principles ... "Wholes". Analysis, in its ... similarities and differences between things

... : 1) ... a series of soil samples sort them into ... categories.  
... : ... a series of precise instructional objectives ... all words in each objective that ... in terms of observable behaviour, ... or minimum acceptable standards.

... : ... the creation of something new form ... principles. The levels of cognitive ... this cumulative aspect becomes evident when ... from the knowledge and skills previously ... (at least to the student). ... have mastered material in the area at ... she can be successful at the synthetic

... : ... appropriate data concerning school drop-outs, ... write out a hypothesis that would ... the factors given and that could be tested

... : ... highest level of the cognitive ... means the formation of a judgement & ... by reference to facts, examples, ... then, means considerably more than ... The judgement must be ... criteria.

... : ... precise instructional objectives for a ... learning situation, judge which one ... and support the choice by stating at least three reasons for it.



- 3 -

If teachers have a rational and a workable classification for their objective, they can label each of their objectives with an appropriate level. Since the objectives are level/grade specific and starting point of instruction for teachers should define the appropriate objectives from cognitive domain for better instructional practices.

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#### REFERENCES

- 1) Bloom, Benjamin S., ed. (1956), Taxonomy of Educational Objectives, Hand Book I : Cognitive Domain, New York : David McKay.
- 2) Pierce Walter D., Lorber Michael A. (1977). Objectives and Methods for Secondary Teaching : Prentice - Hall International, INC., London.

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## TEACHING &amp; EDUCATIONAL OBJECTIVES

Dr. P. Das,  
Regional College of Edn.,  
Bhubaneswar

Teaching is conceptualised as a sequential process which involves five essential steps; namely, defining the goals or objectives, selecting content, deciding on methods of instruction the instruction itself, and measuring or evaluating the results. If the teaching is to have definite purpose & direction definition of goals comes first & evaluating comes last. To try to teach and evaluate without defining objectives is like starting out a journey without knowing where to go. It may be pleasant to wander around for a while, but it is doubtful that any sort of progress can be made without some direction. Therefore, it is argued that education and objectives need to be clearly specified for at least five reasons.

- a) they provide goals towards which the curriculum is aimed;
- b) they facilitate the selection and organisation of content;
- c) they provide the direction for choosing the appropriate method of teaching;
- d) they facilitate to evaluate the outcomes of curriculum & instruction;
- e) they provide suitable remedial measures.

Hence, a good teacher formulates his objectives, chooses methods and materials in accordance with his objectives, employs these methods & materials and uses measurement to determine how well or to what degree the objectives have been attained. In a sense everything is determined by the objectives.

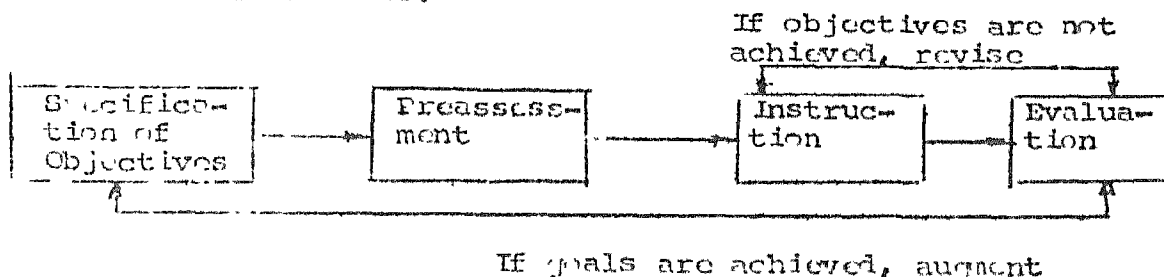
It may be that some teachers will not consciously formulate any objective at all, but will simply teach by the book". Nevertheless, every teacher works towards some objectives, even if it is only to get through the text book by the end of the session. Whatever the objectives and no matter how they are formulated or thought of, they constitute an essential step or part of teaching.

Harper (1962) defined "Objective is an intent communicated by a statement describing a proposed change in a learner - a statement of what the learner is to be like when he has successfully completed a learning experience. It is a description of a pattern of behaviour (performance) we want the learner to be able to demonstrate. The statement of objectives of a programme must denote measurable attributes observable in the programme or otherwise it is impossible to determine whether or not the programme is meeting the objectives".

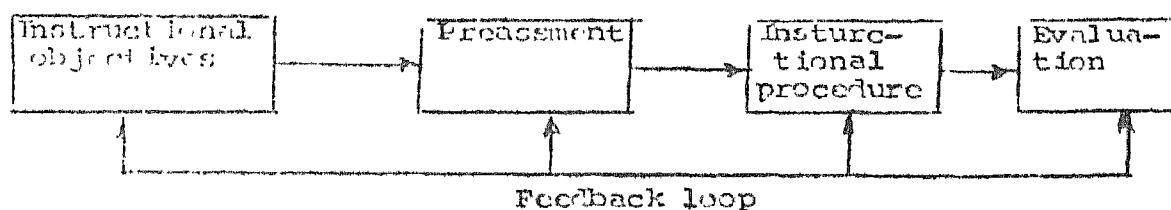
Therefore, every teacher should have clear goals or objectives which will give direction & purpose of his work. It is equally important that these objectives be stated clearly & explicitly so that their meaning & implications are clear and well understood.

In recent years, a number of educators have developed models of instruction that consists of four basic elements : (1) Preparation of precise instructional objectives; (2) Preassessment of students to determine their objective relative to the objectives; (3) Instructional activities to ensure achievement of the objectives and (4) evaluate to determine whether students are able to achieve the objectives.

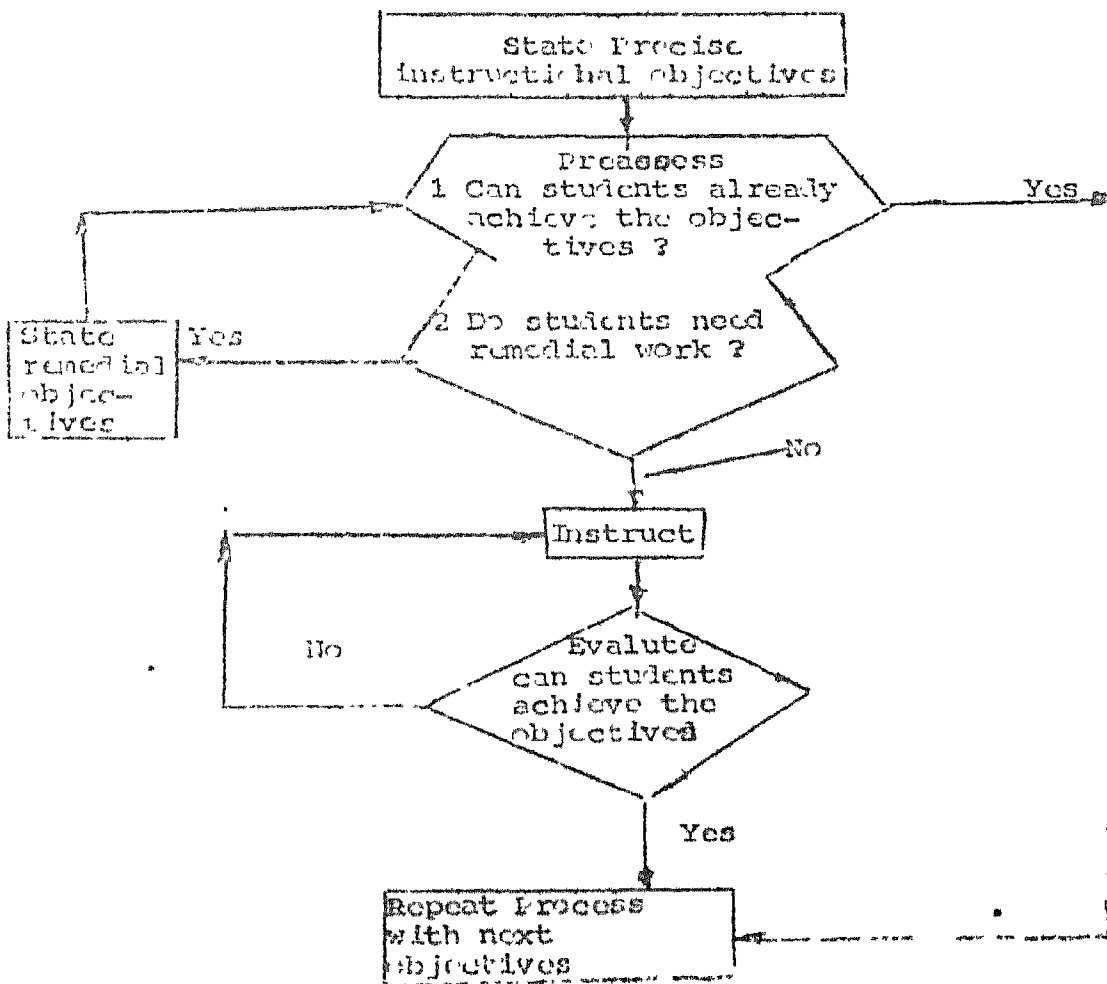
Three models of instruction are given below based upon the above basic elements.



Model-1 A goal - reference Instructional Model of Popham & Baker.



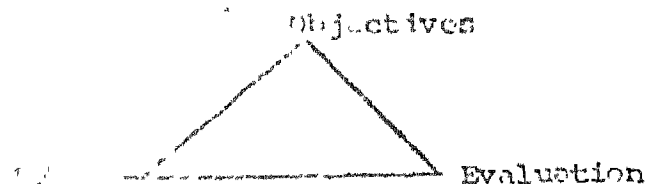
Model-2 A general model of Instruction. of Kibler, Barker & Miles.



Model-3 Logical Instructional Model (LIM)

Model 3 is an attempt to diagram the instructional process. It is more explanatory than model 1 and 2.

... (Chicago) University, Benjamin  
... the inter-relationship of objectives,  
... which are in separable.



In the process of developing instructional models and inter-  
mediate objectives, IBEY evaluation, it is quite evident  
that there are many points of instruction. In every com-  
monly used model, social, psychological, practical, and  
cognitive factors must be taken into account when  
objectives are developed. What individual  
factors must be considered? Objectives decided upon. What individual  
factors must be considered? Objectives decided upon. What individual  
factors must be considered? Objectives decided upon.

Schools all throughout the country are going about the task of organising these instructional objectives in a variety of ways. Some are merely purchasing compilations of objectives and others are trying to change or alter objectives rather than write them out fully. Other school systems are asking teachers to write objectives for their own classes, while still others are organising objectives according to subject matter or grade levels and asking them to write objectives on a collective basis.

They are, therefore, not typical kinds of questions teachers expect to hear as they begin to focus on their objectives.

- 1) Will the objectives assist in satisfying students needs ?
- 2) Can the students attain the objectives ?
- 3) Are the objectives worthy of attainment ?
- 4) Do the objectives lead to a series of increasingly more important objectives ?
- 5) Are the objectives compatible with the over all goals of the community & school ?
- 6) Are the objectives relevant & reflective of social and cultural realities ?
- 7) Are the necessary human, physical and financial resources available ?
- 8) Have there for objectives been considered from sources other than students and parents ?

From the above it is evident that stating of precise instructional objectives is a thought provoking and time-consuming task, but since every other part of the instructional process depends directly on the objective they are all important. If the objectives are poor the rest of the instructional process is likely to be poor also, but if the objectives are well stated, include an observable

behaviour, and are measurable, then the instructional process is more likely to be equally strong and sound.

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#### REFERENCE

- 1) James Lopham and Eva Baker (1970), Systematic Instruction. Englewood Cliffs, N.J. Prentice-Hall.
- 2) Robert F. Mager (1962). Preparing Instruction Objectives. Pearson Publishers, PALO ALTO, California.
- 3) Robert J. Kibler, Larry L. Barker & David T. Meles (1970). Behavioural Objectives and Instruction. Boston, Allyn & Bacon.
- 4) Walter D. Pierce, Michael A. Lorber (1977). Objectives and Methods for Secondary Teaching. Prentice-Hall, INC, London.

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## Evaluation and Comprehensive Evaluation

Dr. P. Das,  
Regional College of Edn.,  
Bhubaneswar

The present system of evaluation does not adequately measure the growth/progress of the students. From the existing experience, it is not difficult to identify the major shortcomings which need to be properly understood and accepted before taking up any plan of evaluation. In a simplified way we can list out these as under :

1. Evaluation is restricted to examination rather than a comprehensive concept of evaluation.
2. Evaluation is considered as end of the course/session rather than as an integral part of teaching-learning process.
3. Evaluation is considered as an act of measurement of students' learning rather than a means for improvement of their learning.
4. Evaluation activities are limited to scholastic aspect rather than total growth of the child.
5. The set of techniques is limited to written examination largely.
6. Quality of written examinations is questionable from the point of view of validity and reliability.
7. Diagnostic evaluation is still a dream of the future.
8. Using evaluation as a feedback has yet to become a reality for improving students' learning.
9. Evaluation is never conceptualised as objective-based, formative, continuous, cooperative and dynamic process.

There may be many more glaring shortcomings of the existing system of evaluation. What is really worth stating is the cause of all these ills. The cause may lie with the teachers or the educational system in general. Therefore, there is an imperative need to make evaluation an integral part of the total teaching-learning process and to make it more comprehensive by taking care of all the three dimensions (cognitive, affective and psychomotor) for all round development of the learner in both scholastic and non-scholastic areas. In this context, the concept of evaluation can be developed.

**Concept of Evaluation** - The concept of evaluation should not be confused with the concept of examination or mere measurement. Generally speaking, educational evaluation is the quantitative and qualitative assessment of the overall growth and progress of pupils towards the goals set in the curriculum and is concerned with values. It is a continuous process making for improving teaching-learning process. The emphasis in evaluation is upon broad personality changes and major shifts in an educational programme. These include not only scholastic achievement, but also non-scholastic areas like attitudes, interests, habits, ways of thinking, health, work habits, personal and social responsibility. Hence evaluation is integrally related to the teaching-learning process. It entails a value judgement and works as a quality control in educational programmes.

**Functions of Evaluation** - Mainly evaluation helps in :

1. Assessing the effectiveness of courses and programmes.
2. Identifying strengths about instructional practices.
3. Determining, clarifying and appraising objectives.

- 2 -

- d) creating motivation.
- e) to assess total progress of the child.
- f) serving as a feedback for both teachers and students for effective teaching and learning respectively.
- g) discriminating and ranking the students.
- h) diagnosing pupils weakness/learning difficulties.
- i) providing basis for guidance and counselling.

**Criteria of Good Evaluation** - The criteria of good evaluation emerge naturally from the basic assumption about evaluation. They can be enumerated as follows :

a) Evaluation should be objective-based : The evaluator should define or spellout clearly the set of objectives to be evaluated. The objectives may be knowledge, understanding, application, skills, attitudes, interests health, work habits, personal and social adjustment etc.

b) Evaluation should be a comprehensive process : Evaluation should cover both scholastic and non-scholastic dimensions of pupils growth and use variety of appropriate tools and techniques of evaluation.

c) Evaluation should be a continuous process : Since evaluation aims at estimating overall growth of the child and basic growth is a continuous phenomena, it is imperative to make evaluation regular and continuous.

d) Evaluation should be a dynamic process : The approach of evaluation should not be rigid, static in nature. It should be flexible and dynamic in respect of frequency of examinations, type of examinations etc.

e) Evaluation should be a cooperative process : Since the emphasis of evaluation is on all aspects of pupils progress, a single teacher is not competent to do justice for evaluating all the dimensions of pupils growth and hence the cooperation of all teachers, students and parents is essential.

**Planning and Implementation Modalities of Evaluation :**  
The following steps are suggested about the modalities of school evaluation :-

a) Determining the areas (both from scholastic and non-scholastic) and identifying the appropriate objectives under each area to be evaluated.

b) Selecting/preparing tools and techniques of evaluation. (Tools may include achievement test, diagnostic test, psychological tests, checklist, rating scale, records, and techniques may be in form of written, oral and practical examination).

c) Determining the periodicity of evaluation - In order to make evaluation continuous, periodicity of evaluation both in scholastic and non-scholastic area should be decided much in advance.

d) Executing the plan - Collection of informations or evidences may be done by using the tools and techniques already decided.

e) Recording the results - Progress report cards both in scholastic and non-scholastic areas should be developed in order to record the results.

f) Using the results for instructional decision - The results of the evaluation may be effectively used for improving classroom instructions.

2. Formative or process evaluation - The scheme of continuous assessment may include the following aspects of pupils' performance:

#### Scholastic Aspect

	Frequency	Tools & Techniques
Classroom tests	Twice/Three times in a year	- Written examination - Oral examination - Practical examination - Achievement Test - Diagnostic Test
Homework	Continued till the end of the primary/secondary/tertiary stage	- Intelligence Test

#### Non-Scholastic Aspects

##### Personal and Social

<ul style="list-style-type: none"> <li>Attendance</li> <li>Behaviour</li> <li>Character</li> <li>Health</li> <li>Interests</li> <li>Leadership</li> <li>Participation in school activities</li> <li>Self-discipline</li> <li>Self-respect</li> <li>Team spirit</li> <li>Values</li> </ul>	Daily/Monthly	<ul style="list-style-type: none"> <li>- Observation</li> <li>- Anecdotal Record</li> <li>- Rating Scale</li> <li>- Observation</li> <li>- Anecdotal Records</li> <li>- Rating Scale</li> </ul>
<ul style="list-style-type: none"> <li>Attitude</li> <li>Character</li> <li>Health</li> <li>Interests</li> <li>Leadership</li> <li>Participation in school activities</li> <li>Self-discipline</li> <li>Self-respect</li> <li>Team spirit</li> <li>Values</li> </ul>	Monthly/Yearly	<ul style="list-style-type: none"> <li>- Observation</li> <li>- Rating Scale</li> <li>- Anecdotal Records</li> </ul>
<ul style="list-style-type: none"> <li>Attendance</li> <li>Behaviour</li> <li>Character</li> <li>Health</li> <li>Interests</li> <li>Leadership</li> <li>Participation in school activities</li> <li>Self-discipline</li> <li>Self-respect</li> <li>Team spirit</li> <li>Values</li> </ul>	Daily/Monthly	<ul style="list-style-type: none"> <li>- Observation</li> <li>- Questionnaire</li> <li>- Interview</li> <li>- Rating Scale</li> </ul>
<ul style="list-style-type: none"> <li>Attendance</li> <li>Behaviour</li> <li>Character</li> <li>Health</li> <li>Interests</li> <li>Leadership</li> <li>Participation in school activities</li> <li>Self-discipline</li> <li>Self-respect</li> <li>Team spirit</li> <li>Values</li> </ul>	Twice in a year	<ul style="list-style-type: none"> <li>- Observation</li> <li>- Interview</li> <li>- Medical Check up</li> </ul>

#### Activities

##### Curricular and Co-curricular Activities

<ul style="list-style-type: none"> <li>Library</li> <li>Art</li> <li>Music</li> <li>Games and Sports</li> <li>Other</li> </ul>	Twice/Three times	<ul style="list-style-type: none"> <li>- Observation</li> <li>- Anecdotal Record</li> <li>- Rating Scale</li> </ul>
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- 4 -

## Cultural Activities

- Drama	Half yearly/Yearly	- Observation
- Music		- Audio-visual record
- Dance		- Rating scale
- Drawing & Painting		
- Sewing		

## Out door activities

- Games	Half yearly/Yearly	- Observation
- Sports		- Audio-visual record
- Mounting		- Rating scale
- C.C.C.		
- Planting		
- Gardening		

## Follow-up action :

The above guidelines attempt to indicate major directions in which the programme of evaluation deserves to move so as to realise the stated objectives. Orientation of teachers towards the new directions of individual and comprehensive evaluation will not be complete unless teachers tries to implement the scheme with sincerity and loyalty.

The following follow-up action plan is suggested :

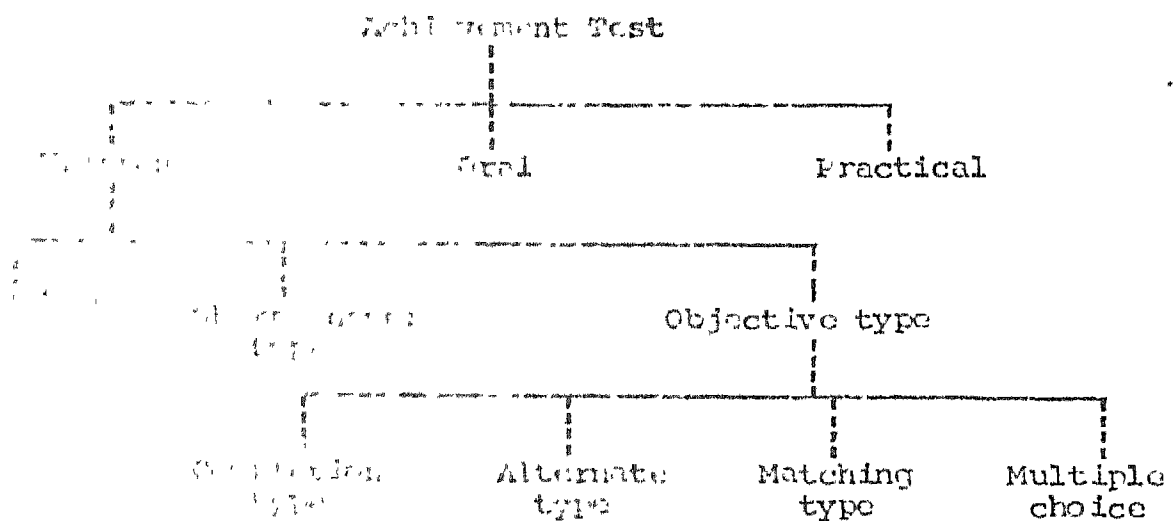
- 1) Organisation of Orientation programmes for teachers about the new directions of evaluation.
- 2) Keeping in view the school conditions, the scheme of evaluation may be defined and implemented on cooperative basis.
- 3) There should be regular supervision of the school evaluation programme and assistance may be provided to the teachers when they face any operational problems.
- 4) Periodic progress cards may be developed and may be supplied to all schools for uniform record of results.
- 5) Action research relating to various aspects of evaluation may be undertaken the findings of which will be taken as feed back for improving evaluation system.

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## 1. Techniques of Evaluation

Dr. F. Das,  
Regional College of Edn.,  
Bhubaneswar.

To judge the overall progress of the child a number of techniques are necessary. They are broadly classified into two types: (i) testing techniques & (ii) non-testing techniques. The first technique which includes tests such as intelligence test, aptitude test, intelligent test, creativity test, etc. The non-testing technique includes records, observation, interview, check list, sociometry, attitude scale, etc. Among the above tools teachers are more familiar with the first type and hence this paper tries to discuss the first type of tests which are normally classified as indic-



The second type is used for measuring scholastic dimensions of pupils. The scholastic aspects of pupils such as regularity, responsibility, attendance, sense of responsibility, spirit of social service, etc. are measured by observation, anecdotal record, rating scale, interview, check-up, questionnaire, interest inventory, etc. These are not acquainted with the nature, function, and implementation modalities of these tests. Hence, in a separate paper of the writer titled "Comprehensive Evaluation" for ready reference.

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TTC/REC/92  
 Shri G.S.Hati  
 Sr.Lect.in Education  
 RCE BBSR

### Value Education in Schools

Value - Value refer to objects that human beings cherish and desire and consider desirable, value of a human being may be simple like cleanliness or abstract like peace.

#### Education & Value

Education is the process of bringing about desirable changes in behaviour in the learner in the way he thinks, feels and acts in accordance with our concept of good life. Hence it is through edn that one can preserve and develop values. It is proper to say that all education in a sense is value education.

#### Crises of values

During the last four decades the society has improved a lot with respect to science and technology but there has been a remarkable decline of values in the society. At the individual or group level, intolerance, hatred, violence, disrespect, falsehood, cruelty and cheating have become the order of the day. The only purpose of living appears to be to achieve immediate gain of wealth, prestige or power by hook or crook.

#### Causes of failure of value education

Although all edn commissions in the past has emphasised value education in schools, (especially the emotional, moral and spiritual education) has not been successful because of the following possible reasons.

- a) Lack of faith in value education ( of teachers and educational administrations )
- b) Lack of knowledge of techniques of value development, process of value development and adequate training of teachers in value education.
- c) Lack of planned programme for implementation of value oriented edn.
- d) Doubtful role play by members of the society ( speaking one thing, and doing something else )

#### Approaches to value education

Value can be provided directly through specific periods in the school time table and assembly. Indirectly values can be inculcated through cocurricular activities, school subjects, field trips and favourable atmosphere of the school.

#### Process of Value education

1. Value education is related to child's psychological readiness and experience
2. The rational understanding of values accelerates the development of values.
3. All values can be taught at all levels but the approaches and activities to be provided will be different for different levels.

contd....P/2.

-2-

4. The value education of a person should be related to the social and cultural context in which he lives and with reference to some universal and eternal standards applicable to all mankind.
5. Development of values is influenced by home, school, peer group, community and media.
6. Co-operation with parents can play an important role in developing values.
7. To know what is right does not necessarily mean that one will do what is right.
8. It is possible that a value of child differs significantly from that of another child.
9. The development of values involves knowledge of values, faith in the value, choosing the right value and putting the value into practice.
10. The school should concentrate on some values to start with.

#### Minimum programmes on value education in schools.

1. The teacher may emphasise values whenever an occasion arises while teaching their subjects in regular classes.
2. Co-curricular/cultural activities should be conducted after proper planning for development of emotional, moral, social and spiritual values ( eg. choosing appropriate topics for elo action and one act plays )
3. Situations should be provided in the school for practice of values in the school.
4. One period a week may be devoted to lectures on Indian culture, lives of greatmen/saints, common features of all major religions and other topics on emphasizing values.
5. Students may be involved in planned group activities like meditation, games, songs, prayers, fieldtrips, social service, cultural programmes for development of values in children.
6. Role play and small group discussions help children to make them aware of values and resolve value conflicts.
7. Regular contact with parents is a step for sure success for value development in children.
8. Class/school wall magazine can be used effectively for value dev. ( e.g. moral stories, prayers etc )
9. School assembly is also another source for value development.
10. The favourable atmosphere of the school will induce the child to practise values like punctuality, regularity, spending softly with others, helping others, cleanliness, co-operation, sincerity etc.

Contd....P/3

11. Teachers should be thoroughly trained in the area on value education. They may be given chance to visit institutes in the country where value education is practised properly.
12. Study circles may be arranged fortnightly/monthly in the school on topics like Karma-joga, necessity of values in life, duty and discipline, unity of faiths, selfless service, force of prayer etc to sustain faith in value education.
13. Students should be rewarded for development of different values annually. This should not be restricted to 1st, 2nd or 3rd prize. Anybody who satisfies the teachers on values may be rewarded.
14. Teachers may also be rewarded annually in a school who make significant attempt for development of values in students.
15. Every festival is based on some values significance of festivals of different religions may be summarized briefly to the students one day before the day of the festival.

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THE ETHICS AND CODE OF CONDUCT OF TEACHERS (I)

Dr. F. Purohit,  
Regional College of Education,  
Bhubaneswar

The strength and success of an educational system of a country depends on its teachers, whether they teach in schools, colleges or universities and hence the importance of the quality of teachers cannot be over-emphasized. Infact the quality of a nation depends on the quality of its citizens and the quality of the citizens depends on the quality of education system prevalent. If on any single factor the quality of a nation depends then it is on the quality of its teachers. Hence it is rightly said by the Education Commission that the quality of a country is being shaped in her class

What contributes to the quality of teaching of a teacher? Obviously his educational qualification, professional training, his personal qualities, managerial skills and the place he occupies in the society, his personality and in the community he lives. The education is a life long process and never ceases on his receiving the educational and professional training degrees or diplomas from educational institutions. "A teacher can never trulyly learn and he is still learning himself. A lamp can never light unless it keeps burning its own flame", says Rabindra Nath Tagore. Thus the education of a teacher is never complete.

"Whereas among the oldest of societies' occupational activities, teaching as a profession, however, has developed most recently and latest times" (Haggett and Stinnett, 1960). The history of teaching as a profession must be viewed in relation to all other professions. It is, sometimes, considered to be "an offshot of other professions" (Stinnett, 1965).

As a word it is only used as the word profession. No one who is not a professional goes up claim to offer a significant contribution to the society, then it begins to identify itself as a profession. In fact, only a few occupations a few years ago are now being considered as professions.

Whitehead (1943) makes a clear-cut distinction between the two terms, vocation and profession and recognises craft as an avocation based upon customary activities and modified by the nature of the individual practice whereas a profession is an occupation where activities are subject to theoretical analysis and are guided by theoretical conclusions derived from that analysis.

Considerable number of studies have not been devoted to the study of the history of professions and commenting on this in their book and history of English professional life Carrsaunders and Wilson (1933) said: "..... there has been no study of the historic development of professional associations or of the social, economic, and ethical problems involved. This is all the more astonishing in view of the greater skill and responsibility of professional men compared with the members of trade unions, under their associations and their professional regulations".

even though the term professions as used in the present day had no counterpart in the ancient world, to be sure, there existed the classic professions - law, medicine and theology (study of God, religion) no doubt but the practitioners did not feel the urge to unite to form organised professions, simply because they were regarded as an occupation of gentlemen and they were classified as clergymen (Carr-Saunders and Wilson, 1933). By the end of the eighteenth century, scientific and technological age came in and the Industrial Revolution created new areas of specialised intellectual activity and the need for new professions, which then began to proliferate rapidly (Stinnett, 1965). A number of occupations which demanded disciplined and scholarly training, by then, to name a few, engineering, teaching, journalism, forestry, nursing etc. were generally conceded in mature societies as professions.

#### PROFESSION NOT DEFINED

Customarily teaching is referred to as a profession, whether it is properly classified depends on the criteria employed in defining a profession. By dictionary definition it is "a calling in which one professes to have acquired some special knowledge used by one either in instructing, guiding or advising others or serving them in some art". Many more definitions of the term profession have been proposed by authorities from time to time but they vary in degree of their emphasis on different functions which the profession is supposed to perform but as yet no definition is so widely accepted that it could be regarded as authoritative (Kale, 1972).

Carr-Saunders (1928) realised the difficulty in defining the term profession and said almost reluctantly, "A little reflection shows that what we now call a profession emerges when a number of persons are found to be practicing a definite technique founded upon some definite body of knowledge. A profession may perhaps be defined as an occupation in which a specialised intellectual study and training, the object of which is to supply skilled service or advice to others for a definite fee or salary". Stinnett (1965) also puts emphasis on fee or salary, mainly because of general belief that only a paid work constitutes a profession.

Many other social scientists (Licherman, 1956; Huges, 1965; Barber, 1965) have also defined the term profession but none of them could provide a comprehensive and correct idea of what really constitutes a profession. But it is inevitable to draw a dividing line between professional and non-professional occupations however difficult and arbitrary it might be. Carr-Saunders and Wilson, (1933) drew a distinction between professional and non-professional occupations and concluded, "It is not merely that any dividing line might be arbitrary. It is that the drawing of a line, which though arbitrary is essential, presents great difficulties if it is not impossible. Nevertheless the term profession clearly stands for something. That something is a complex of characteristics. The acknowledged professions exhibit some important features. These stand at the centre, and all around them are grouped conditions exhibiting some but not all these features.

#### PROFESSION - ITS CHARACTERISTICS

However, some writers have listed some characteristics or distinguishing features in their study. The characteristics of the term profession as suggested by the National Education Association of the U.S.A. (1948) are as follows :

1. The primary activities essentially intellectual,  
 2. The possession of highly specialised knowledge,  
 3. The possession of an extended professional (as contrasted  
 with general) preparation,  
 4. The possession of continuous in-service growth,  
 5. The possession of a life career and permanent membership,  
 6. The possession of a high standard of standards,  
 7. The possession of a closely knit professional  
 community.

Many of the criteria as suggested by  
 Flexner (1915), Flexner (1915) and  
 others are not strictly of the term profession. Certain  
 criteria are so widely accepted that  
 they are taken as a working idea of what constitute a profession,  
 and the definition of the term can be regarded as authorita-  
 tive. In the context of the definition referred to, it is evident that

- 1. Teaching is an essential social function;
- 2. Teaching is an intellectual activity;
- 3. Teaching is a moral code of ethics;
- 4. Teaching is a professional organisation;
- 5. Teaching is a career for personal gains;
- 6. Teaching is a training;
- 7. Teaching is a community.

Teaching is among the newest, although,  
 it is as old as the world, and at least as old as theology,  
 the history of States of finance schools partly or  
 wholly of the development of teaching as a profess-  
 ion. There are, however, still a section of the social  
 sciences which treat teaching on a par with law or medicine  
 and which do not accord it the professional status to teaching. These  
 sciences, therefore, necessitate a probe into the status of  
 teaching in the light of the characteristics, listed in the preceding  
 paragraph, which is expected to possess.

Teaching is:

1. A social function, regulated, interpreted and enforced by  
 the community, is generally an accepted characteristic  
 of a profession. The teacher is accepted as admitted to the profession,  
 and is expected to be obedient to the goals of national life which  
 are the basis of the moral code of ethics they have  
 accepted as a guide to their professional conduct.

2. Teaching has its professional ethics different  
 from other professions. It regulates its term, conditions, norms and quality  
 of work. Professional ethics adds to the professional obligation a  
 moral obligation. A code of conduct gives for its members many dos  
 and don'ts.

3. Teaching profession has slowly evolved a code of  
 conduct and professional ethics. The teaching profession is lagging  
 far behind other profession in this respect.

4. The Professional Ethics of Teachers as indi-  
 cated by the National Education Commission held at N.C.E.R.T.,  
 New Delhi, in January, 1980 are as follows:-



... level of the ... party ... In the ... the ...

1. The all-round development of the human personality
2. Fundamental rights of every child to get equal educational opportunities based on social justice without discrimination of caste, colour, religion, sex, social origin, political opinion or any other condition.
3. ... through education to have pride in our rich cultural heritage and to defend the unity and integrity of the country.
4. ... on the principles of democracy, socialism and ... to strengthen the ...
5. ... international understanding.
6. ... to make sufficient funds for providing and ... staff ... in an ...
7. ... requiring expert knowledge, ... of individual and ... for the welfare of the students.
8. ... self-discipline and resolve to ... ethics and enforce it on ... according to ...
9. ... recognises the role of teaching ... of social change ... and accords a status ...

... the role of ethics, a distinction ... (i) personal ethics, (ii) organisational ... ethics prescribes norm ... while ... as the member of a professional group ... ethics of teachers ... on the professional ... we therefore ... in ... and their ...

... a professional code of ethics, the ... have almost completely neglected. No Teachers' Organisation ... this code of professional ...

... professional ethics is almost non-existent, the ... organisational ethics, however, finds a place in the ... of the organisations. But so far as ... it is quite ineffective. Members of the ... are under obligation to comply with the directives of the organisational ethics and there are also penal provisions ... But in actual practice, as the date ... are not ...

... .., the Teachers' Organisations are subjected to criticism for their failure in adopting and enforcing professional standards. Information collected through a survey of the teachers indicates that most of the teachers indulge in unprofessional activities like undertaking private tuitions, encouraging students to take examinations and evading professional duties. The Government has so far done nothing to curb such unprofessional activities. A survey conducted reveals 81.8 percent of the respondents, who are teachers put together confess the failure of the Government in this front.

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# BIBLIOGRAPHY

- |              |   |
|--------------|---|
| Author, Name | As cited by T.M. Stinnett   |
| Author, Name | <u>The Profession of Teaching</u> 1965  |
| Author, Name | "Is Social Work a Profession ?"   |
| Author, Name | Proceedings of the National Conference of Charities and Corrections (The Hillmann Printing Company, 1915)         |
| Author, Name | <u>Professional Problems of Teachers</u> , 4th Edition, The Macmillan Company, New York, 1960                     |
| Author, Name | "Role of Teachers' Organisations in Assistance to Developing Countries", Education Panorama, Vol. XI, No. 3, 1969 |
| Author, Name | <u>Profession of Teaching in India</u> M. Publications Ltd., Bombay 1972  |
| Author, Name | <u>Teaching as a Profession</u> Englewood Cliffs, N.J., Prentice Hall Inc., 1956                                  |
| Author, Name | Education in the U.S.A. 1918  |
| Author, Name | <u>The Profession of Teaching</u> 1962  |
| Author, Name | Dept., Prentice Hall of India Pvt. Ltd., New Delhi, 1965  |
| Author, Name | <u>The Accumulative Society</u>   |
| Author, Name | New York: Mac & Co., N.Y., 1920   |
| Author, Name | Education in India 1948-49  |
| Author, Name | Education in India, Part I 1962   |
| Author, Name | My phases of Ideas, Cambridge University Press 1933.  |

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TTC/REC/92

Professional Ethics and Code of Conduct of Teachers (II)

Dr. Priyaprana Purohit,  
Regional College of Education,  
Bhubaneswar

The National Policy of Education (NPE) 1986 in Part IX Section 9.3 under the heading 'The Teacher' states : "Teachers Association must play a significant role in upholding professional integrity, enhancing the dignity of teachers and in curbing professional discrimination. National level associations of teachers could prepare a code of Professional Ethics for Teachers and see to its observance".

This clearly indicates that there is a felt need for a clearly defined Professional Code of Ethics for teachers. Some Teachers' Associations were of the view that they have already formulated code of ethics for their teachers. But when asked if they are implemented properly or not they reluctantly replied 'yes' which indirectly meant 'no'.

Keeping the recommendation as given in NPE 86 in view, a country wide deliberations were held and draft code of ethics for teachers was evolved which was modified in the Conference of National Level Teachers' Organisations (represented by All India Federation of Educational Associations (AIFEA) and many national and state level teachers' organisations) held at National Council of Educational Research and Training (NCERT), New Delhi on 18th and 19th January, 1988.

The code of ethics as accepted by the teachers' organisation, has in it, a preamble and is divided in five parts. Part I deals in Teacher in relation to students, Part-II - Teacher in relation to parents/Guardians and Part III, IV and V deal with 'teacher in relation to society and the Nation', 'Teacher in relation to Professional Colleagues and other Professional Organisations' and 'Teacher and Organisation of Management and Administration' respectively.

In the preamble the teachers have given firm faith on the firm and development of students and education, and to promote a democratic, socialistic and secular society. Now let us discuss the code of ethics, part wise.

Part I - Teacher in Relation to Students

The Teacher shall,

1. treat all students irrespective of caste, creed, sex, status, religion, language, place of birth, with love and affection and be just & impartial to all;
2. help students for the development of physical, intellectual, social, emotional and their intrinsic values and character;
3. promote in students scientific temper and spirit of enquiry, creative self expression and aesthetic sense leadership quality and proper attitude towards environment and encourage them to ask questions to satisfy their curiosity;
4. develop in students love for manual work and respect for workers;
5. enable the students to appreciate our rich cultural heritage and to live in diversity;

.....p/2

1. Recognise individual difference, socio-cultural differences and teach accordingly;

2. Implement an approved scheme for remedial teaching and supervision for coaching or tutoring his students;

3. Deal judiciously with respect with students and shall not divulge confidential information about student except to those who are duly entitled to it;

4. Instill in students of love for mother-land and universal brotherhood;

5. Exhibit a model of dress, speech and behaviour worthy of a teacher;

6. Inspire in students a sense of respect and admiration for their mother-land and help protect them as their own;

7. Avoid controversy among the students;

8. Not tolerate any misdeed on the part of the student;

Article 11 Teacher in relation to Parents/Guardians

The teacher shall,

1. seek to establish cordial, and co-operative relations with parents/guardians;

2. strive to promote rapport between the educational institution and the parents;

3. respectfully to view-points in regard to educational matters of the students;

4. not divulge any information given by parents regarding their children concerning their own children to any other except those who are duly entitled to it;

5. provide information to parents regarding the attainment of their children;

6. not say or do anything which will tend to undermine the confidence in their parents or guardians;

7. seek to involve parents in school improvement programmes;

8. promote a cordial, effective parent-teachers' association;

Article 12 Teacher in relation to Society and Nation Recognising that, teachers are part and parcel of social milieu sharing the mood and aspirations of the people.

The teacher shall,

1. strive to develop the educational institution as a community and human resource development centre providing knowledge and information needed for such development;

2. strive to fight dissipation and separatist tendencies based on caste, religion, region, language and extra-territorial loyalties;

3. try to utilise fully the resources available in the community to improve teaching-learning process;

4. refrain from interfering with the local factional politics;

5. strengthen national integration and promote the ideals of democracy, secularism and socialism in the community;

6. strive to enlighten the community with the help of appropriate agencies on welfare programmes, citizenship rights, legislative and administrative measures, intended for the benefit of the people;

7. endeavour to seek public co-operation in cent percent enrolment and retention of children of school-going age till their complete education;

8. strive to provide security and protection for women, and encourage them to work in rural areas with dignity and honour and protect them from unsocial elements;

9. take particular interest for promoting education of girls and weaker sections of society and create awareness of equality of women;

10. protect and defend himself from any injustice, humiliation and exploitation by any individual or institution in the society.

#### Part IV TEACHER in relation to Profession, Colleague and other Professional Organisations

##### 2. Teacher in relation to colleagues and profession

The teacher shall,

1. acquire and maintain high academic and professional standards;

2. seek and participate in programmes of continual professional growth in life inservice education-seminars, symposia, workshops, conferences, etc.;

3. keep abreast with latest developments and techniques in the subject matter and pedagogy;

4. seek, as a matter of right, to conduct experiments and innovations in teaching-learning practices;

5. avoid making derogatory statements about colleagues especially in the presence of pupils, other teachers, officials or other persons;

6. co-operate with the head of the institution and colleagues in the institution and outside in both curricular and co-curricular activities by providing professional assistance;

7. plan operational schedule of coverage of syllabus (lecturing, written assignments and tests) and complete the work in time with scope for revision;

8. be willing to assist new entrants to the profession;

9. help in the corporate responsibility of protecting the image of the educational institution and the system as a whole;

10. accept as a professional the individual responsibility of reporting to the concerned in an appropriate manner all matters that are harmful to the interests of the students and the development of the institution;

11. organise social and cultural activities in the school with community participation;

1. In relation to colleagues

1.1. Teachers shall,

1.2. take full participation of teachers and share decisions on matters that affect them and the institution;

1.3. make all administrative commitments in consultation with the management;

1.4. monitor the supervision and evaluation practices in the institution;

1.5. report on staff transfers and terminations;

1.6. inform the teacher immediately about the nature of the charges against the teacher's professional or personal conduct;

1.7. be honest to colleagues and follow accepted principles in the assessment of the performance of colleagues;

1.8. maintain a high level of discipline and order in the discharge of their duties and set an example to them in matters of duty and discipline.

2. In relation to professional organisations

2.1. Teachers shall,

2.2. be members of a professional organisation and participate actively;

2.3. render services to a professional organisation as a professional responsibility;

2.4. participate, as a matter of right, in the formulation and conduct of the programmes of professional organisation and contribute to its strength, unity and solidarity;

2.5. be responsive to the call of the organisation and maintain its discipline and discipline;

2.6. ...

3. In relation to Management and Administration

3.1. The teacher in the institution has been harassed, humiliated, and exploited by some unscrupulous management and has been subjected to all ills in the education system. Any code of ethics for teachers will be unrealistic and unworkable without corresponding changes on the part of the management and administrative staff of the Government. Therefore, similar code of ethics should be formulated and accepted by managements and administration. The teachers and institutions shall see that :-

3.2. The management and educational administrators shall be prompt, fair, impartial and honest in matters like recruitment, promotion and advancement of duties of teachers;

3.3. Nepotism, nepotism and political interference shall be avoided in matter of recruitment, promotion and transfer;

3.4. The management shall be fair in admissions and promotions

- 5 -

4. the management and administration shall provide the needed infrastructure physical facilities, equipment, laboratories, libraries and adequate staff on the basis of subject requirements and other conditions for providing an atmosphere of freedom and innovations;

5. the teacher-pupil ratio be kept at 1 : 30 for effective teaching and individual attention;

6. the teachers shall be provided with adequate salary, uniform pay structure, a decent standard of living, social security, retirement benefits, housing and uniform service and working conditions required to discharge duties without want and fear or favour;

7. a system be evolved for teacher evaluation, Data-based rewarding merits and discouraging sub-standard performance;

8. involve teachers in planning and decision-making in matters concerning education, teacher recruitment, teacher education, service condition and grievance removal. For this, a suitable statutory machinery shall be evolved at the national and state level;

9. full opportunities be given to teachers to improve their academic and professional standards by providing libraries, reading-rooms, continuous inservice education programme, study leave, travel facilities, facilities for attending conferences, seminars etc., both in and outside the country;

10. substitute be provided for long absence of regular teachers.

#### Teacher in Relation to Management and Educational Administration

Assuming that the fore-going conditions are fulfilled, the teacher shall,

1. be aware of legislative enactments, and rules and regulations governing educational policies and employment and abide by them;

2. co-operate with the head of the institution, the management and the educational administration in running the institution according to the stipulated norms;

3. show due respect to constituted authority;

4. be punctual and regular in attending the institution in carrying out duties and assignments and shall not abstain from doing without proper information;

5. refrain from attempting to influence individual member of the management and officers for furthering personal career prospect or gaining professional favours;

6. protest assigning of duties for which he feels unqualified and which make it difficult to render professional service;

7. resist pressures from management and administrators in the matter of admissions and promotion of students;

8. refuse to impart any instruction which is detrimental to the interests of the students, society, or the nation;

9. refuse to accept any duty unconnected with the profession;

10. seek the assistance of auxiliary staff in doing clerical and other non-academic work;

11. not shirk responsibility and accountability to the students, the institution and the community as a whole.

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1. Teacher organisations, after mutual consultations, may include, within their respective organisations, a suitable disciplinary procedure for the observance of this code and for dealing with cases of professional misconduct.
2. It shall be the endeavour of teachers and teacher organisations to see that all conduct rules governing teachers now in existence in various forms, in different states and all centres are replaced by the faithful observance of the code of professional ethics.
3. The Code of Professional Ethics after it is finally adopted by Teacher Organisations, shall be translated into all the regional languages.

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Dr. Prasad Choudhary,  
 Lecturer in Education,  
 Regional Educational  
 Education, Bhubaneswar.

Eric Ashby(1967) has identified four revolutions in education and they are :-

- 1) First, the task of educating the children was shifted in part, from parents to teachers and from home to the school;
- 2) Second, the adoption of written words as a tool of education prior to which oral instruction prevail when it was with reluctance that writing was permitted to co-exist with the spoken word in the class room;
- 3) the third revolution came with the invention of printing and the subsequent wide availability of books;
- 4) the fourth revolution came with the development in electronics notably those of the radio, television, audio recorder, video recorder and the computers.

Any technology which increases the rate of learning would enable the teacher to teach less and the learner to learn more. The development and use of modern Educational Technology is viewed differently by different people. Some view, that it is a revolution in the educational system aimed at improving the effectiveness and efficiency of education at different levels. Some castigate it as a movement aimed at relieving the teacher from education by the use of sophisticated machines and gadgets. Some also argued that educational technology would reduce the role of teachers and the students would be reduced to mechanical robots. Educational Technology to date has been given a mixed verdict by the educators and laymen to use it in a proper manner for a proper use of education, training and extension work.

Modern technology implies, the application of science to education. When we apply the science of learning and communication to teaching we arrive at technology. Educational Technology with the traditional teaching aids helps effective teaching with the help of modern tools, techniques, paper, ink, books, radio films, television and more sophisticated modern hardware like computers, space satellite. Thus educational technology is not to replace the teacher, but to aid him, in effective teaching-learning process.

What is Educational Technology(ET) : ET is the application of modern methods to teaching and learning. It is not the application of modern tools to education rather applying the technology of modelling and simulation. Programmed learning is a well tried out technique which is used in educational system. For effective teaching learning many more equipment and facilities are available and most popular are satellite, T.V. and Radio. What is important is to integrate students teaching hardware and appropriate software so that they will contribute maximum and complement each others. Thus ET means the sum total of educational facilities, media, methods and techniques for optimizing learning. ET means the best utilization of available resources for optimizing learning.

Another method of learning is the process of discovery. This is the process of finding out something new or different. It is done for the purpose of gaining new knowledge or understanding. Another method of learning is the process of reflection. This is the process of thinking about what has been learned and how it can be applied. It is done for the purpose of deepening understanding and improving performance. The final method of learning is the process of practice. This is the process of repeating a skill or task in order to become proficient at it. It is done for the purpose of improving performance and gaining mastery.

The concept of ET in India is of recent origin. It is in vogue for the last eight to ten years. It means the use of mass media & modern technology in education; and (ii) the use of all resources in a system in order to optimize the technology of education. In the present context, viz., teaching machines, film projectors, audio laboratory, tape recorders, cassette players, television, video tape recorders, computers etc. ET is quite comprehensive. It takes into account all resources (software) e.g. slides, films, audio, video tapes in the system and their uses to

In order to understand the definition of the terms 'education' and 'technical education', we must first understand the two terms 'education' and 'technical'. Education is commonly defined as the process of acquiring knowledge, skills, and values, and the development of the power of reasoning and judgment, and the ability to adapt to a changing social environment. Technical education, on the other hand, is defined as the process of acquiring knowledge and methods of doing/getting things done in a particular profession or industry.

... development, application and evaluation of new techniques and aids to improve the process of training.

... a systematic approach to the teaching-

3) Planning the total process of teaching and learning in terms of specific objectives, utilizing all available resources, to provide maximum human learning about effective instruction.

4) Planning the use of all educational facilities - Media, Technology and Instruments for optimizing learning.

... technology in education nor technology of education and both are all pervasive which pervades the whole educational process to make it meaningful for the teacher and for all the learner who learns and modifies his behaviour for the betterment and the betterment of mankind.

Education Technology (ET) : If ET is used as the design of mechanical and electrical gadgets the scope is limited to the production. And if ET is used as a process-oriented technology the scope is limited to the production of teaching-learning material. It is basically the technique of developing software for the application of the concept of management and organisation of man and material resources for specific objectives. Thus ET covers both hardware as well as implementation of both hardware and software. For the application of ET the educational problems are to be identified and then thinking should be done on the following points : (1) Availability of resources at home; (2) Resources that can be managed by external agencies; (3) Clear specification of the problem; (4) The constraint of time and money; (5) How different resources inter

Major approaches of E.T. : Experience and research has shown that the following figures are generally valid.

We learn : 1.0 percent through TASTE  
1.5 percent through TOUCH  
3.5 percent through SMELL  
11.0 percent through HEARING  
83.0 percent through SIGHT

We remember : 20 percent of what we HEAR  
30 percent of what we SEE  
50 percent of what we SEE AND HEAR  
80 percent of what we SAY  
90 percent of what we SAY AND DO

There is an old saying which reads "I hear, I forget; I see, I remember; I do, I understand".

There are three major approaches in the field of ET. They are :- (1) Hardware approach; (2) Software approach; (3) Instructional design approach.

A. Hardware Approach - Its origin is in the application of science and engineering in education. Technology of machine is closely related to the machine. Teaching machine is the only machine designed primarily for teaching and deliberately invented to fulfil an instructional requirement. But all other A.V. aids were designed and manufactured for improving communication system and not for educational one but now we are using them (Radio, Television, Tape Recorder, Record Player et.c). These machines were developed for market rather than for education. Thus the process of teaching-learning has been gradually mechanised. The teacher can teach a larger group effectively with the help of these machines and the per capita cost of education has been reduced.

B. Software Approach - It refers to the application of teaching learning principles to the direct and deliberate shaping of behaviour. ET is closely associated with the principle and theory of teaching. It is also known as constructive ET in which some constructive work is to be performed. It deals with (1) analysis of educational problems; (2) selection or construction of measuring instruments to evaluate instructional outcomes; (3) construction and selection of strategies to produce desired educational outcome.

In Hardware approach ET is concerned with teaching aids like teaching machines and in software approach ET is concerned with learning aids like programmed instruction.

C. Instructional Design Approach : It is concerned with educational administration and organisation. It has brought to educational managements a scientific-quantitative approach for solving educational administrative problems.

Objective of Educational Technology (E.T.) : Technology is the opium of intellectuals. It is to guard against this possibility that responsible technology is talked of. The objectives of E.T. are :

- IF**
1. To determine the goals and formulate the objectives in educational terms;
  2. To analyse the characteristic of the learner;
  3. To organize the content in logical or psychological sequence;
  4. To mediate between content and resources of presentation;
  5. To evaluate the learners performances in terms of achieving educational objectives;
  6. To provide the feed back among other components for the modification of learners.

Thus E.T. is an innovation which has to cover a long distance in India.

